

213 H-370

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

ISSUED: March 30, 1982

Forwarded to:

Mr. Clarence D. Rogers, Jr.
Chairman
The Ohio Turnpike Commission
682 Prospect Street
Berea, Ohio 44017

SAFETY RECOMMENDATION(S)

H-82-7

On July 22, 1981, about 5:50 a.m., a 1978 Ford van occupied by seven persons was traveling eastbound on the Ohio Turnpike in a construction zone near Cleveland, Ohio where traffic was operating in the eastbound lanes. Shortly after the van entered the construction zone, it drifted into the opposing traffic lane and collided nearly head-on with a GMC tractor-semitrailer traveling westbound. The van driver and five van passengers were killed, and one van passenger was seriously injured. The driver of the tractor-semitrailer received minor injuries. ^{1/}

Safety Board investigators reviewed the Traffic Control Plan (TCP) established by the Ohio Turnpike Commission for the construction project. The traffic control devices in work zone three were in conformance with requirements in the Manual on Uniform Traffic Control Devices (MUTCD), ^{2/} with the exception of some sign mounting heights and messages. The work zone did not have a temporary double yellow centerline which is recommended in the MUTCD for typical two-way construction work zones. Although the temporary double yellow centerline is recommended, it is not a specified requirement in the MUTCD for construction work zones.

National statistics indicate that two-lane roadways experience higher accident rates than divided interstate roadways. Interstate-type highways have about one-half the fatal accident rate and about one-third the injury rate of two-lane, two-way roadways. One reason for safer travel on interstate roadways is the positive separation of two-way traffic by a median and/or barriers.

In the construction work zone where the accident occurred, the westbound lanes had been temporarily closed. All westbound traffic was being diverted and the eastbound lanes were accommodating two-way traffic. When a normally divided highway is reduced to a two-lane, two-way situation, measures should be taken to maintain the safe driving conditions expected by the public when traveling on a divided interstate roadway.

^{1/} For more detailed information read Highway Accident Report—"Collision of North American Van Lines Tractor-Semitrailer and Ford Van in Construction Zone, Ohio Turnpike, near Cleveland, Ohio, July 22, 1981" (NTSB-HAR-82-1).

^{2/} The MUTCD is published by the Federal Highway Administration, U.S. DOT, 1978, and is the approved national standard for all highways open to public travel in accordance with Title 23, U.S. Code, Sections 109(b) and 402(c) and 23 CFR 1204.4.


There was no positive separation of the eastbound lanes in the construction zone to insure that two-way opposing traffic would remain within their proper lane. If positive separation, such as barriers, drums, cones, or vertical panels, were not feasible, then temporary striping should have been used in conjunction with appropriate warning signs and delineation devices to clearly indicate the required vehicle path. The Ohio Turnpike Commission opted to use dashed lane lines and complementary warning signs in the construction zone. The use of dashed lane lines may not have alerted the driver that he was in a temporary two-way opposing traffic situation, especially during early morning hours. The same type of pavement markings were being used as a lane division line on the divided highway prior to the construction zone.

The MUTCD recommends that the double yellow centerline be used in conjunction with other temporary delineation devices, such as raised pavement markers, in construction zones to denote the intended vehicle path. The double yellow centerline denotes the separation of traffic traveling in opposite directions, and the raised pavement marker provides a visual/audible indication to drivers that cross into another traffic lane. Raised pavement markers are normally more visible to drivers than dashed lane lines, especially in inclement weather conditions. The use of dashed lane lines in lieu of the normal double yellow centerline may have confused the van driver and led him to falsely assume that he was still on the divided roadway.

Therefore, the National Transportation Safety Board recommends that the Ohio Turnpike Commission:

Develop and implement an operational policy that will insure that when the turnpike carries two-way traffic in a construction zone, positive barriers and/or drums, cones, or vertical panels are used to maintain separation of the two-way traffic. If positive barriers or other traffic lane channelization devices are not practical or feasible, use delineation devices, such as raised pavement markers, in conjunction with temporary solid double yellow centerlines to separate two-way traffic.
(Class II, Priority Action) (H-82-7)

BURNETT, Acting Chairman, and McADAMS, GOLDMAN, and BURSLEY, Members, concurred in this recommendation.


By: Jim Burnett
Acting Chairman