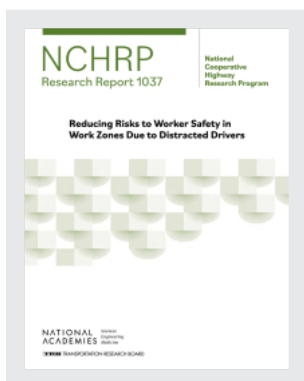


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NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM

NCHRP RESEARCH REPORT 1037

**Reducing Risks to Worker Safety in
Work Zones Due to Distracted Drivers**

**LuAnn Theiss
Gerald L. Ullman**

TEXAS A&M TRANSPORTATION INSTITUTE
College Station, TX

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2023

NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM

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Recognizing this need, the leadership of the American Association of State Highway and Transportation Officials (AASHTO) in 1962 initiated an objective national highway research program using modern scientific techniques—the National Cooperative Highway Research Program (NCHRP). NCHRP is supported on a continuing basis by funds from participating member states of AASHTO and receives the full cooperation and support of the Federal Highway Administration (FHWA), United States Department of Transportation, under Agreement No. 693JJ31950003.

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The needs for highway research are many, and NCHRP can make significant contributions to solving highway transportation problems of mutual concern to many responsible groups. The program, however, is intended to complement, rather than to substitute for or duplicate, other highway research programs.

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FOREWORD

By David M. Jared

Staff Officer

Transportation Research Board

NCHRP Research Report 1037: Reducing Risks to Worker Safety in Work Zones Due to Distracted Drivers presents proposals for temporary traffic control strategies aimed at reducing worker safety risks due to distracted driving in work zones. Development of these proposals was based on state-of-practice review and field evaluation of selected strategies. These proposals will be of interest to transportation agencies and contractors seeking to apply new technologies for promoting safety in work zones for both drivers and workers.

For highway construction and maintenance work zones, there is increasing concern about distracted drivers nearly and actually hitting pedestrians and/or equipment in work zones. While driver distraction is cited in 8 percent to 17 percent of fatal work zone crashes nationally, these figures may underestimate the role that distraction plays in work zone crashes. The advancement of new cell phone technologies now allows drivers to email, text, and make extended phone calls while driving, broadening the sources of potential distraction. Hence, an increasing need exists to determine what transportation agencies can do to minimize or mitigate the intrusion of distracted drivers into work zones. A significant amount of research has investigated how distracted driving can affect an individual's ability to drive or the impact of technology use on driver performance, with a focus on enforcement, education, and advocacy to reduce or eliminate use of technology while driving or operating a vehicle. Little research, however, has focused on distracted driving in work zones. *NCHRP Synthesis 587: Use of Smart Work Zone Technologies for Improving Work Zone Safety* summarized research on tools used to warn drivers about work zone conditions and the associated metrics for successful warnings, for example, vehicle speed reductions after encountering work zone notifications and diversion rates after delay notifications. The research summarized in *NCHRP Synthesis 587*, however, did not explore the effectiveness of distracted driving countermeasures in work zones.

Under NCHRP Project 20-07/Task 358, "Reducing Risks to Worker Safety in Work Zones Due to Distracted Drivers," Texas A&M Transportation Institute (TTI) was asked to develop a set of proposals on practices that can be used by transportation agencies and contractors to (1) alert distracted drivers to the presence of a work zone or maintenance moving operation and (2) prevent them from hitting a moving work vehicle or intruding into a work zone.

In addition to *NCHRP Research Report 1037*, a presentation introducing this report is available on the National Academies Press website (nap.nationalacademies.org) by searching for *NCHRP Research Report 1037*.



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