

2022 Mid-Continent Transportation Research Symposium

Ames, Iowa

September 14–15, 2022

intrans.iastate.edu/events/midcon2022/

Messaging Techniques to Increase Vehicle Spacing at Work Zones

Jing Dong-O'Brien, Iowa State University

John Shaw, Iowa State University

Minsoo Oh, Iowa State University

Abstract

Maintaining sufficient car-following gaps allows drivers enough time to react to unexpected and complex situations at work zones, and thus can reduce the rear-end collision potential. Work zones provide an opportunity to deliver messaging aimed at encouraging safer driving behavior at moments when that information is highly relevant. This paper develops and evaluates roadside messages to increase vehicle spacing (headway) in work zones. As the phrasing of anti-tailgating messages appears to affect compliance, the anti-tailgating message sign content is carefully designed based on prior research findings and tested following the American National Standards Institute (ANSI) standard Z535.3. A two-stage survey is conducted at public offices in Iowa, while drivers are waiting in line for services such as driving licenses, license plates, and vehicle title transfers. The best performing messages will be used in the field test.