



FACT SHEET

Evaluation of Automated Flagger Assistance Devices

PROJECT TITLE

Evaluation of Automated Flagger Assistance Devices

STUDY TIMELINE

December 2016 – June 2018

INVESTIGATORS

Henry Brown, University of Missouri-Columbia, PI

AGENCY CONTACTS/CHAMPIONS

Jennifer Harper, Research Director

For more information, please contact Jennifer Harper,
Jennifer.Harper@modot.mo.gov

FURTHER RESOURCES

<https://spexternal.modot.mo.gov/sites/cm/CORDT/cmr18-004.pdf>
<https://rosap.ntl.bts.gov/view/dot/35103>

Introduction or Problem Statement

Automated flagger assistance devices (AFADs) are designed to improve worker safety by replacing flaggers who are typically located near traffic approaching a work zone. The objective of this project was to evaluate the effectiveness of a new AFAD developed by the Missouri Department of Transportation (MoDOT).



Methodology or Action Taken

The MoDOT AFAD configuration, involving STOP/SLOW paddles, Red/Yellow lights, and a changeable message sign (CMS) was incorporated onto a truck-mounted attenuator for operator protection.

The scope of this project included two phases: a field test with CMS and a simulator study (both with and without CMS). The two phases were each followed by a survey that captured driver preferences and understanding. For the first time in the United States, detailed quantitative driver behavior measures were used to compare the effectiveness of human flaggers versus AFADs.

Conclusions or Next Steps

Survey results indicated the MoDOT AFAD was the most preferred option, with the human flagger being the least preferred. Participants also rated clarity, visibility, safety, and efficiency of each flagging method, with the MoDOT AFAD scoring the highest in all four of these categories.

Potential Impacts and Benefits

The research conducted in this project helps to illustrate that public sentiment and reaction to this new flagging device was positive and provides encouragement for moving the technology towards field implementation. In utilizing this technology in lieu of standard flagging operations, many lives can be saved.