

RESEARCH SUMMARY



AUGUST 2025



Increasing School Bus Stop-Arm Compliance

A significant number of school bus stop-arm violations occur every day throughout the country. In Minnesota, violation and citation data suggests these incidents are grossly underreported and underenforced due to a time-consuming reporting and enforcement process. This project examined current processes and recommended improvements to encourage higher rates of reporting and enforcement.

What Was the Need?

Vehicles that closely approach or pass a school bus with its flashing red light stop-arm extended pose a danger to children who are boarding or exiting the bus. In Minnesota, data indicates that these school bus stop-arm violations are significantly underreported.

To formulate solutions and effectively address this issue, MnDOT and local agencies needed a better understanding of the reporting processes and accurate violation data. The results could then be used to develop short-term recommendations and strategies for improving reporting and data collection practices that could be shared with school districts, bus companies and law enforcement agencies.

What Did We Do?

Investigators sought to accurately document stop-arm violations and citations to identify patterns and propose

solutions. In this analysis, researchers used data from three sources:

- School Bus Illegal Passing Driver Survey, which is conducted by a national association and provides data through voluntary reporting of school bus stop-arm violations that occur in Minnesota and across the country.
- Minnesota State Patrol stop-arm violation online report, which documents violation details such as location, bus travel direction, violating vehicle details, presence and location of children, and status of local law enforcement notification.
- Minnesota court citation data for school bus stop-arm violations.

Through a series of interviews and site visits with bus and law enforcement agencies and organizations, researchers examined processes for documenting,

“The goal of this project is to improve safety, reduce risk and change driver behavior. Communication and collaboration can support this effort and create a safer experience for everyone—especially children.”

—SCOT EDGEWORTH, PROGRAM COORDINATOR,
MnDOT EAST METRO TOWARD ZERO DEATHS

reporting, reviewing, citing and tracking reported violations. Among those interviewed were First Student Inc., NorthStar Bus Lines, Saint Paul Schools Transportation Department, Minnesota State Patrol, Brooklyn Park Police Department and Saint Paul Police Department.

What Did We Learn?

Available data highlighted significant underreporting in Minnesota. In 2023, 96% to 99% of estimated violations were not reported. Violations were also underenforced, with only 0.4% to 1.6% of estimated violators receiving citations.

Data analysis further indicated inconsistencies that occurred statewide. Neither reporting nor citation trends correlated with community population, population density, number of local police or injury crashes.

Overall, investigators found a fractured system due to an inefficient process for recording and reporting violations and limited law enforcement resources for enforcement.

Reporting a violation took approximately 63 minutes. First, a bus driver completed a form from memory that included the make, model, color and license plate of the violating vehicle and driver demographics. Then a bus administrator reviewed the form, collected evidence from the video,

determined the appropriate law enforcement jurisdiction and sent the information while also transcribing the violation into the Minnesota State Patrol online report survey. Beyond the initial 63 minutes, law enforcement then had to decide whether to issue a citation and potentially devote further resources to a contested citation.

To streamline the process, investigators recommended a standardized reporting form with relevant and user-friendly questions that would improve data entry and accuracy. A standardized paper form—designed to meet the needs of bus drivers, bus administrators and law enforcement—is now available for adoption. Additionally, a digital form that mirrors the revised paper form was recommended for continued collection of pertinent stop-arm violation data that policymakers can use to make informed policy recommendations.

Investigators proposed other improvements to the process, ranging from bus drivers keeping a notebook for taking notes to law enforcement agencies exploring the issuance of warning letters in place of citations.

What's Next?

To aggregate the new standardized reporting, investigators recommended the development of a statewide web-based, centralized reporting

portal. This portal would create a user-friendly platform for bus companies to report violation events, upload pertinent video and image files, and automatically route reports to the appropriate law enforcement agencies. The portal would provide violation details in a format that increases the efficiency of officer review and administrative work in issuing citations.

Additionally, the portal would provide a database to track law enforcement activity for reported violations while also providing data to analyze where enforcement processes may need refinement.

About This Project

REPORT 2025-37

“Analysis of School Bus Stop-Arm Violation Reporting and Enforcement in Minnesota: Lessons Learned and Opportunities for Process Improvements.”

Find it at mdl.mndot.gov.

CONTACT

research.dot@state.mn.us

TECHNICAL LIAISONS

Scot Edgeworth, MnDOT
Scot.Edgeworth@state.mn.us

Sgt. Michael Kukowski,
Minnesota State Patrol
Michael.Kukowski@state.mn.us

INVESTIGATORS

Brian Davis, University of Minnesota
Davis862@umn.edu

Nichole Morris,
University of Minnesota
NLMorris@umn.edu

PROJECT COST

\$196,194

www.mndot.gov/research