



ABOUT THIS PROJECT

PROJECT NAME: In-Service Performance Evaluations: Datasets and Methodologies

PROJECT NUMBER: HR-4003

PROJECT FUNDING PROGRAM: State Research

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PROJECT CHAMPION:
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RESEARCH IN PROGRESS

Uniform data collection to improve safety hardware assessment

Safety hardware devices designed for use in roadways, such as barriers, breakaway signs, and crash cushions, undergo testing in accordance with national standards. Conducted in a controlled environment, these tests ensure that safety and engineering requirements are met. Once devices are deployed on roadways, state departments of transportation (DOTs) evaluate collision and maintenance data to assess the performance of these devices in real-world conditions. This input not only indicates hardware effectiveness in different road settings, but also tracks the state's inventory as safety devices evolve over time.

Data can come from multiple sources, such as police and road maintenance crews, but currently

neither the process nor the format for collecting these data is consistent, making broad analysis of road hardware less feasible. To address this need, Iowa DOT will study existing data collection methods with the goal of developing and communicating a uniform process for collecting data on safety hardware.

"The safety of Iowa's drivers is our top priority, so we need to know how our equipment performs in collisions," said Shawn Blaesing, Iowa DOT's maintenance GIS coordinator. "Having compatible data from multiple sources will help us to more accurately assess our inventory."

Due to requests from its field crews, Iowa DOT began exploring solutions for tracking and assessing roadside hardware years ago. Because of these early efforts, there is now

a decade's worth of data from collision sites that can be referenced for developing better collection approaches.

"Iowa DOT is in a unique position to take the lead on this work," Blaesing said. "Improving safety hardware data collection and communication will not only benefit Iowa DOT and other state agencies, but will also inform local municipalities that use the same devices."

The project is planned for completion in June 2024.

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