



MIDWEST ROADSIDE SAFETY FACILITY

ENGINEERING THAT SAVES LIVES

Just about everyone gets in a car accident at some point in their lives. You might have experienced it yourself: that sickening feeling of sliding out of control, squealing brakes, perhaps shattering glass. The Midwest Roadside Safety Facility (MwRSF) exists to increase the odds that you, your family and your loved ones walk away from those accidents.

30 YEARS OF SAFETY INNOVATION

Founded in 1989, MwRSF has dedicated 33 years to keeping people safer on the road through its research, design and testing.

“This really small group of researchers started on a mission so many years ago and it is still our mission.”

– Ron Faller, Ph.D., P.E.
Director and Research Professor
Midwest Roadside Safety Facility

During those 33 years, a focused group of engineers and scientists along with a cadre of eager students have racked up an impressive list of inventions and accomplishments, including the Midwest Guardrail System, the SAFER barrier for the motor sports industry and many other barrier designs for bridges, roads and work zones.

MwRSF’s research is in three main areas, primarily focusing on the first:

- **Roadside safety** – MwRSF is a global leader in developing crash-worthy safety structures like guardrails and barriers.
- **Motor sports** – The SAFER barrier, the first energy-absorbing barrier for oval race tracks, was developed

at MwRSF and is used by NASCAR, the IndyCar League and the Indianapolis Motor Speedway.

- **U.S. Department of Defense** – The MwRSF team designs anti-ram barriers and traffic control devices to shield military bases from attack.

“You can’t drive five miles anywhere in the country without being protected by one of our systems.”

– Ron Faller, Ph.D., P.E.
Director and Research Full Professor
Midwest Roadside Safety Facility

STUDENTS AND MwRSF

Students are an indispensable part of MwRSF’s mission. A significant MwRSF-developed system that keeps you safe across the U.S. and around the world is the three-beam bullnose system, developed by a University of Nebraska–Lincoln student working on his master’s degree in mechanical engineering. Bob Bielenberg was that student, and today he is an MwRSF research engineer whose daily work makes the roads safer.

Along with other research engineers and faculty, Bob mentors student research assistants from many engineering majors: civil, mechanical, electrical and even computer science. These students are undergraduates, master’s students and doctoral candidates. In fact, more than half of MwRSF’s 60 employees are students, and they often stick around: Many of MwRSF’s staff got their first paycheck as students. Regardless of where they end up, MwRSF’s students come away with new career possibilities and the pride of knowing their engineering skills directly contributed to creating a better, safer world.



“The technical skills I developed at MwRSF related to instrumentation, data analysis and structural design have been directly applicable to the work I have done in my career. Working closely with engineers, technicians and business development individuals and writing technical reports helped me expand my soft skills and have allowed me to excel as an engineering professional. Graduate students will benefit immensely from employment at MwRSF.”

– Thomas Ammon,
Reliability Engineer, Monolith
former MwRSF intern



“There is a great deal of satisfaction in going to work and knowing you’re saving lives.”

– Bob Bielenberg,
Research Engineer,
Assistant Director Roadside
Safety Division, MwRSF

HOW YOU CAN BE PART OF MwRSF’S MISSION

MwRSF receives two key resources from the university: space and students. The bulk of MwRSF’s operating budget comes from grants and fees for testing services offered to corporations and other institutions; however, as a research arm of a public university they are not allowed to make a profit. Therefore, when writing grants or charging for services, they can cover costs like personnel hours and materials but can’t raise funds needed to grow. Donor support can provide “move the needle” money that allows MwRSF to enhance its capabilities and expand its lifesaving research into other areas.

The Midwest Roadside Safety Facility Development Fund (01147790) was established to provide money for MwRSF’s areas of greatest need:

Making capital improvements – developing new roadways and testbeds for research and adding or maintaining storage for vehicles and equipment

Purchasing equipment – instrumented dummies (\$125,000 each), high speed cameras (\$30,000-\$50,000 each) and other test instrumentation, vehicles (Bobcat, dump truck, tow-truck)

Recruiting researchers – adding engineers and researchers with needed expertise to the staff

Providing student support – both giving MwRSF an essential part of its workforce and giving students enriching, hands-on job experiences that are often career-changing

Funding innovation – supporting game-changing ideas that aren’t grant funded or part of a test project but have real potential for saving lives

New 105,000-square-foot, three-story building at the Lincoln Airport – increasing space for collaboration, more student interns, a new materials lab and more lifesaving research

Right now the fatality rate per vehicle mile traveled is dropping, NASCAR drivers are more likely to survive a crash and MwRSF engineers are developing the technology needed to improve the safety of Americans who are serving their country. Your gift of support to MwRSF provides you with the unique opportunity to be a part of work that is truly saving lives.

To make a gift in support of MwRSF or for more information, please contact Justin Carlson, director of development for the College of Engineering, at justin.carlson@nufoundation.org or 402-458-1196.