FRA Grade Crossing Safety Research

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Where We Are Today


FRA conducted research in 10 of the 33 research topics identified in the 2009 workshop. Examples of topics include:

- FRA/Volpe research on LED-enhanced signs
- FRA/Volpe research on photo enforcement practices
- FRA/Volpe research on gate skirts and other pedestrian safety treatments at crossings
- FRA/AAR/Volpe research on law enforcement strategies and suicide media reporting
- FRA/ENSCO/Volpe research on identifying and classifying humped crossings
Current FRA Research Partners
Research Needs Focus Areas

- Engineering/Technologies
- Human Factors
- Community Outreach/Education
- Enforcement
- Hazard Management
Research Needs Results

- 152 Industrial partners, law enforcement, federal, state, local officials, and members of the public attended.
- Groups generated numerous ideas ranging from expanded initiatives to new research projects.
- 22 high priority recommended actions were generated.
Objective: Provide up-to-date engineering standards and best practices for safety improvements at grade crossings.

- Wireless Technology for Crossing Activation.
- Vehicle to Vehicle and Vehicle to Interface to Inform.
- Alternative Warning Devices.
Objective: Provide up-to-date engineering standards and best practices for safety improvements at grade crossings.

- Vehicle Activated Enhanced Advanced Warning Sign.
Human Factors

Objective: Better understand grade crossing accidents, fatalities, and injuries to develop countermeasures and focus future research.

- Improve Close Call/Near Miss Reporting
- Integration of Rail Safety Measures into Driver Education and Licensing
- Incorporate Rail safety Professionals into Development/Planning Process
- Educate Youth to Educate Adults
Objective: Educate partners, stakeholders, and the public about grade crossing safety to improve awareness, understanding, and safe behavior.

- Trespasser Identification, Motivation and Messaging
- Research efficiencies of Social Media Platforms and Messaging
- Driver’s Education
Objective: Develop enforcement strategies for improving grade crossing safety through enhanced law enforcement and regulatory compliance.

- Technology Opportunities for Law Enforcement
- Funding Opportunities
Enforcement

Objective: *Develop enforcement strategies for improving grade crossing safety through enhanced law enforcement and regulatory compliance.*

- Uniformity of Highway-Railroad Grade Crossing Laws
- Development of National Grade Crossing Law Enforcement Campaign
Hazard Management

Objective: Develop mitigating strategies and/or programs related to hazard identification, risk assessment, and risk control.

- Model Communication Process
- Enhanced Data Exchange Between Vehicle Control Systems and Train Control Systems
- Updating Evaluation Tools for Rail/Highway Grade Crossing Improvements
Conclusions

• Conference was a Success!
• Participants identified and shared existing industry best practices.
• Explored new abatement and mitigation strategies.
• Workshop provided FRA with future research topics.
• Gave leverage to increase research in this area.
Published Reports (2016-2017)

...and 6 Final Reports Under FRA Review
RAIL— Moving America Forward.

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