Trespassing:
the Leading Cause of Rail-Related Fatalities
in the United States

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Rail-Related Fatalities in 2016

Total Fatalities: 794

- Trespass: 490 (62%)
- Highway-Rail: 270 (34%)
- Employee: 1%
- Other: 24 (3%)

Rail-Related Fatalities in 2016
Trespasser Fatalities and Injuries
2010 — 2016

Fatalities
Injuries

Trespassing

Between 2012 and 2016

• Average of **450** people were killed in railroad-trespasser incidents each year

• Approximate 5-year total is **2,244** trespasser fatalities

• Another **2,175** people were **injured** during the same period
Trespass/Suicide Data Trends

- Almost 25% of fatalities are the result of suicide
- True number may be higher given known underreporting of suicide and inconsistent data quality
- Currently reviewing past 3 years of FRA data to uncover trends and establish baseline to judge future mitigation impact

2014 Fatalities*

- Trespass (non-GRX) 490
- Suicide (at GRX) 24
- Suicide (non-GRX) 217
- Grade Crossing** 270
Top 9 States
Trespassing Fatalities (2016)

- California: 97
- Texas: 38
- Florida: 32
- Pennsylvania: 38
- Illinois: 26
- New York: 23
- North Carolina: 27
- New Jersey: 22
- Georgia: 15

Total: 267

Source: U.S. Department of Transportation Federal Railroad Administration
Rail Moving America Forward
Trespass Fatalities by Age
(2011 – 2014)
Our Focus

• Research
• Collaboration
• Technology
• Enforcement
• Community Outreach
Trespass Prevention Research

Partnering with Volpe and other key stakeholders to analyze collision causation and develop safety countermeasures, programs, and guidance to reduce the number of casualties due to trespassing.
Community Trespass Prevention

• Provide national guidance on trespass mitigation
• Develop a long-term, sustainable risk mitigation strategy
• Develop a working partnership with local, regional, and State departments; document the process and techniques employed to mitigate trespass events
2015 Trespass Workshop

Workshop goals

• Welcomed 195 attendees, including representatives from international partners
• Identify and share existing industry leading practices and explore new strategies
• Compile a list of stakeholder-generated research
Global Railway Alliance for Suicide Prevention (GRASP)

- Collaborate with international community working on rail suicide prevention
- Learn from efforts implemented overseas and use this to develop plans in the US
- Compare definitions and establish easier ways to share and learn from international efforts
Technological Approaches

- Standardized system of data collection and reporting
- Research use of technology or method relative to environment or condition
- Technology to influence behavior
Trespass Detection and Warning

- FRA developing a large-scale trespassing detection and deterrent system.
- Focus is on emerging technologies and technology transfer opportunities.
- Will produce a guide for law enforcement and railroads to follow when using technology to detect and detour trespassing.

*Trespassers caught on camera.*
Evaluating Emerging Technologies

Anti-trespass guards
Suicide Signage Countermeasures

• At least 241 confirmed suicides in 2014

• Developed report detailing existing evidence of effectiveness for proposed rail suicide countermeasures.

• Use findings from recent report to explore pilot projects with interested rail carriers
Media Guidelines for Suicide Reporting

- Certain media representations of suicide can draw people to attempt suicide using the reported means.
- Provide rail carriers and media representatives with rail-specific guidelines for how to responsibly report on suicide incidents that occur on the rights-of-way.
Enforcement

• Model trespass statute
• Grant program for railroad enforcement
• Model railroad law enforcement authority
• Use technology to detect, deter and apprehend
Community Outreach and Education

- Target national associations to raise trespass awareness
- National Railroad Safety Day/Week
- Community outreach with the major leagues sports
GIS Mapping and Analysis

• GIS mapping of suicide and trespass incidents
• Use GIS tools to understand any unique properties of suicide vs. trespass locations
• Plot countermeasure implementations to track how effective they have been to mitigate suicide and trespass incidents
Cause of Death Determination

• Current process of relying on coroner/ME rulings can take 6 – 12 months
• In addition, rulings are made by variety of individuals, adding uncertainty to the data
• Exploring ways to use UK-like system (Ovenstone Criteria) to make probable determinations to use while reports are finalized
Summary

• Trends have been increasing for trespass-related suicides.
• We will continue to work to reverse this trend through research, collaboration, enforcement, technology, outreach and education
• Collaborating with, and learning from all of our international partners is key to success
Questions