Short Rail Safety Issues Facing Alabama

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Short Rail Safety

- Objectives:
  - Why does it matter
  - What are short lines
  - Where do short lines operate
  - Short rail line safety issues

Short Rail Safety

- Class I – 7 railroads operating in the United States (Amtrak, BNSF Railway, Canadian National Railway, Canadian Pacific-Kansas City, CSX Transportation Norfolk Southern and Union Pacific.

Short Rail Safety

- Class II – 25 railroads operating in the United States (Alabama & Gulf Coast Railway); 423 total rail miles; 330 in Alabama.

Short Rail Safety

- Class III – 603 railroads operating in the United States; 47,500 miles; 29% of the industry total.
- Currently, Alabama has 25 Class III Railroads operating as part of the Alabama Railroad System.

Short Rail Safety

- In 1981, there were 9,461 rail collisions; 728 fatalities; 3,293 non-fatal injuries.
- In 2024, there were 2,261 rail collisions; 262 fatalities; 763 non-fatal injuries.
- In 2025, there have been 1,293 rail collisions; 164 fatalities; 440 injuries.

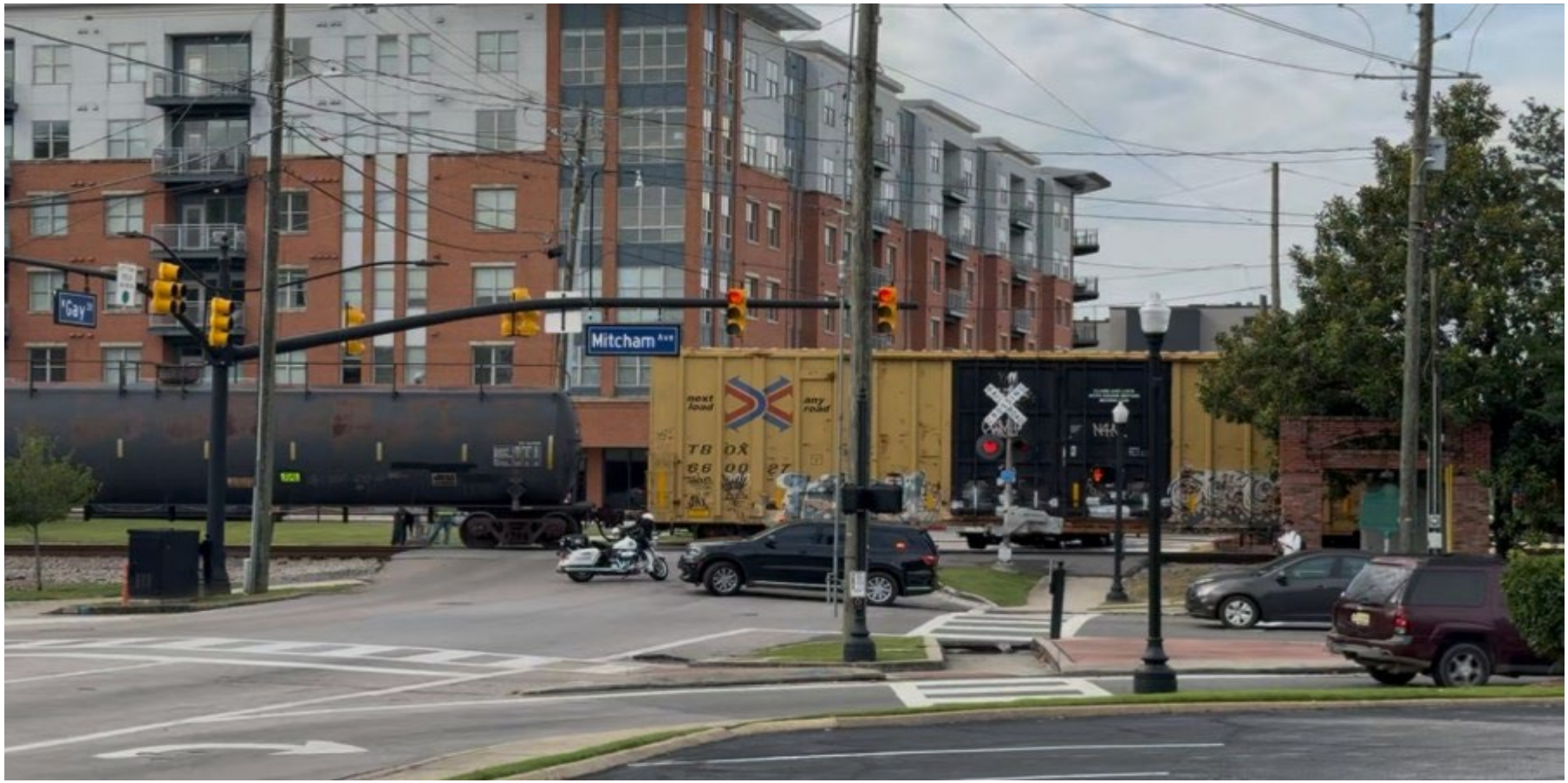
Short Rail Safety

- Currently, Alabama ranks 8th Nationally:
- 87 Rail Collisions
- 9 Fatalities
- 31 Non-fatal injuries
- Rail Mileage in Alabama is approximately 3,973 miles.

Short Rail Safety

On June 20, 2025, at approximately 7:06am, a collision occurred at a railroad crossing at North Gay Street and Mitcham Avenue in Auburn, AL. The incident was between a CSX train and a single occupant vehicle.

Short Rail Safety



Short Rail Safety


TTX
Railcar Pooling
Experts
STOP
RED
AUBURN POLICE
144

Short Rail Safety

Christian Smaw

22 years old

Birmingham

Short Rail Beginnings

Short Rail Lines began in 1826; the first commercial railroad in the United States was the Granite Railway.

Short Rail Beginnings

Located in Quincy, Massachusetts; operated from quarries in Quincy to the Neponset River; approximately 4 miles; commercial rail for transporting granite.

MUTCD 11th Edition Updates

Part 8 – Rail and Light Rail Transit

- Diagnostic team involved with any changes with highway rail crossings.

MUTCD 11th Edition Updates

This is defined as “a group of knowledgeable representatives of the parties of interest in a grade crossing or group of grade crossings” (see 23 CFR Part 646.204).

MUTCD 11th Edition Updates

- A Diagnostic Team includes, at a minimum:

- Highway agency with jurisdiction

MUTCD 11th Edition Updates

- Railroad company and/or transit agency
- Regulatory agency with statutory authority, if applicable
- Federal Railroad Administration (FRA), if appropriate

MUTCD 11th Edition Updates

- Under the new guidance in 8A.03, the diagnostic team is called into action long before any new rail grade crossing traffic control system is to be installed or modifications are made to an rail grade crossing traffic control system.
- What now qualifies as a modification? Paragraph 5 of that section offers some needed clarification, but it is always better have erred on the side of caution.

MUTCD 11th Edition Updates

- Always heck with one of your typical Diagnostic Team members before proceeding with work at or near a grade crossing.
- This is a relatively new concept for many and most likely, there might be a learning curve, especially as the Diagnostic Team figures out how they want to define “modification.”

MUTCD 11th Edition Updates

- At highway-rail and highway-light rail transit grade crossings, there is often an intersection of different systems, each intersection contains its own maintenance teams, operational goals, and priorities.
- Given that each location contains variables, it is clear that no longer can a one-size-fits-all approach to traffic control devices serve the needs of rail safety.

MUTCD 11th Edition Updates

- At this point, a Diagnostic Team is required to step in. The members of the Diagnostic Team are the experts who are tasked with reviewing the specific needs or challenges at each crossing and then make targeted recommendations just for that locatoin.
- Some has to be responsible for ensuring that every “shall” and “should” condition contained within in the MUTCD is correctly applied.

MUTCD 11th Edition Updates

- Significant work went into updating Part 8 of the Manual to incorporate terms and definitions and add guidance on the Preemption of Highway Traffic Signals at or Near Grade Crossings. National best practice guides such as Preemption of Traffic Signals Near Railroad Grade Crossings, A Recommended Practice of the ITE, 2nd Edition, have long served as the premier source for guidance on the topic.

MUTCD 11th Edition Updates

- The National Committee, Sponsors and FHWA have worked tirelessly to ensure Part 8 is more fully incorporated with traffic signal design guidance on this topic as well as on queue management strategies such as pre-signals and queue cutter signals.

MUTCD 11th Edition Updates

- Section 1B.03 of the Manual has set a specific compliance date for the review of existing preemption and queue management strategies, giving agencies a decade from the Manual's effective date to fully assess their highway traffic signals at or near grade crossings.

MUTCD 11th Edition Updates

- In simpler terms, if you represent an agency that operates a traffic signal with railroad preemption, the clock is ticking! You have nine years left to review each preempted system to confirm it meets the newly elaborated requirements and determine a plan to fix any deficiencies.

MUTCD 11th Edition Updates

Preempted system rail refers to traffic signal systems that are interconnected with railroad wa rning devices to enhance safety at intersections near railroad crossings.

- Preemption allows traffic signals to stop when a train is approaching. This will ensure vehicles can move away from the tracks safely.

MUTCD 11th Edition Updates

- There are two main types of preemption:

- **Simultaneous preemption**, which occurs when the traffic signal and railroad warning devices activate at the same time.
- **Advance preemption**, which occurs before the warning devices activate.

MUTCD 11th Edition Updates

- Traffic Signals at or Near Grade-Crossings Section 8D.09 – 8D.12 • 4 new treatments suitable for supplementing railroad crossing safety. Guidance on when each treatment is applicable is listed in Sections 8D.09 thru 8D.12

MUTCD 11th Edition Updates

- Preemption – Movement Prohibitions – Pre-Signals – Queue Cutter Signals
- Assessment and Determination of appropriate treatment to achieve long-term compliance is required within 10 years of adoption of federal MUTCD

MUTCD 11th Edition Updates

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MUTCD 11th Edition Updates

- However, now Part 8 more fully incorporates traffic signal design guidance on this topic as well as on queue management strategies such as pre-signals and queue cutter signals.

MUTCD 11th Edition Updates

- High Profile Grade Crossings Section
- 8B.16 - Word message warnings and selective exclusion regulatory signs for specific vehicle types should be used in addition to, or in place of, low ground clearance grade crossing signs.
  - Auxiliary plaques such as AHEAD, NEXT CROSSING, or USE NEXT CROSSING should be placed in advance at the nearest intersecting highway to permit a U-Turn.

MUTCD 11th Edition Updates

- If engineering judgement dictates, advisory speed limit plaques should be posted
- A signed detour sign should be installed to guide potential hang-up vehicles to alternate crossings.
- Compliance Date: 5 years from date of adoption of federal MUTCD

Short Rail Safety Issues

- One of the biggest safety challenges to Short Rail in Alabama is roadwork in or near an active railway.
- Too many times we find work zones encroaching near or directly across a rail grade crossing.

Short Rail Safety Issues

Another challenge is bridge replacement.

- Do we need to raise the roadway?
- Do we have room on either side of the tracks?
- Are there active rail lines using the tracks?

Short Rail Safety Issues

Short Rail Safety Institute

- Safety Culture Assessment
- Hazardous Material Training
- Emergency Preparedness
- Leadership Development

Short Rail Safety Issues

Diagnostic teams can assist with some of these challenges.

Communication is the key for better coordination.

Questions