



**COLORADO**

Department of Transportation

Presentation to the Transportation Legislative Review Commission

July 24, 2023

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# Rail Safety

07/24/2023





# Presentation Overview

- Status of Rail Safety in Colorado
  - Statistics on Accidents and Outcomes
- Regulatory Aspects
  - Current Legislative and Regulatory Activity
- Current Actions
  - Research and Development
  - Grants Programs
    - Railroad Crossing Safety and Elimination
  - Emergency Response





# Status of Rail Safety

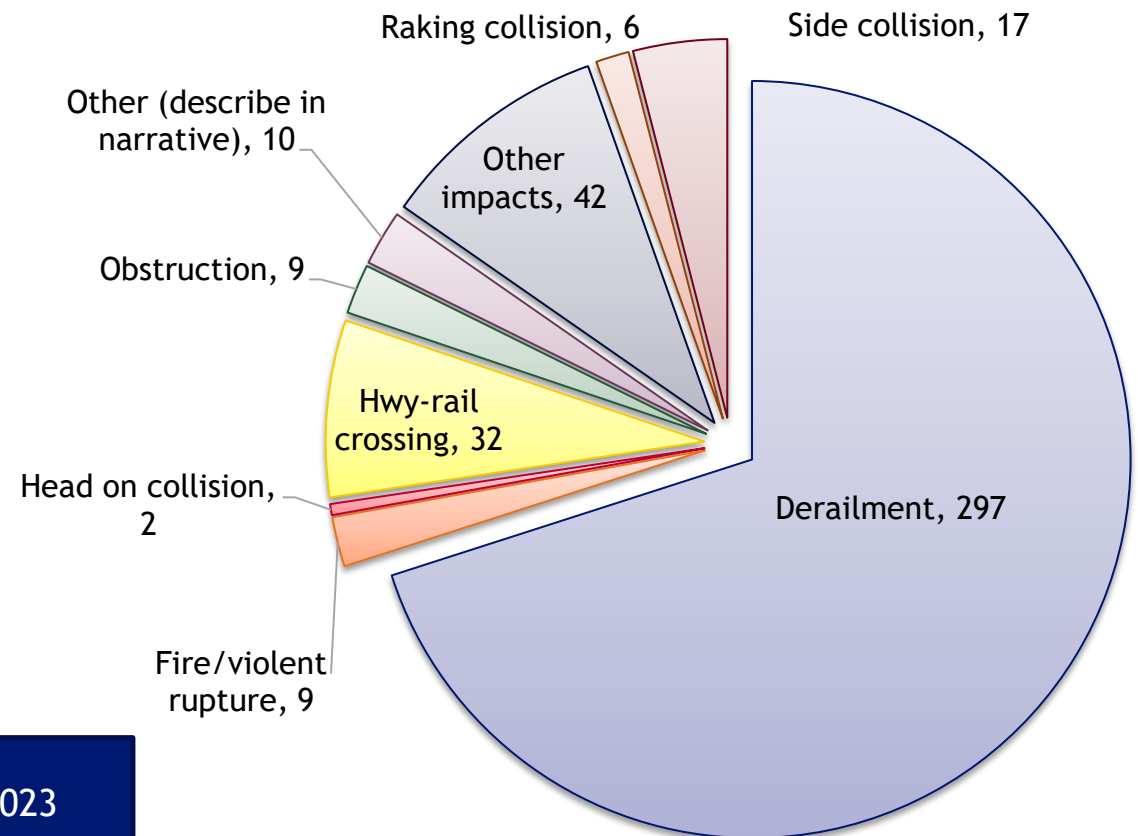
- Rail remains one of the safest ways to move passengers and freight
  - Rail is the most economical and environmentally friendly way to move large quantities of materials over long distances
- Colorado has very few rail-related accidents
  - Only two hazardous materials releases in the past 10 years
- Ongoing improvement to safety are still warranted
  - Ongoing partnerships with freight railroads and CDOT continue
  - Partnerships both in passenger rail development, grants programs, and safety



# Rail Accidents in Colorado

- Rail accidents are extremely infrequent in Colorado
  - Total of 424 since 2013
  - Roadway crashes: 95,000 in 2022 alone
  - Colorado is #22 nationwide
- Majority: derailments
  - Tend to be minor, typically in yards
  - Average train speed 7.6 MPH
  - Average 4 cars derailed

Total Incidents 2013-2023  
Colorado Only

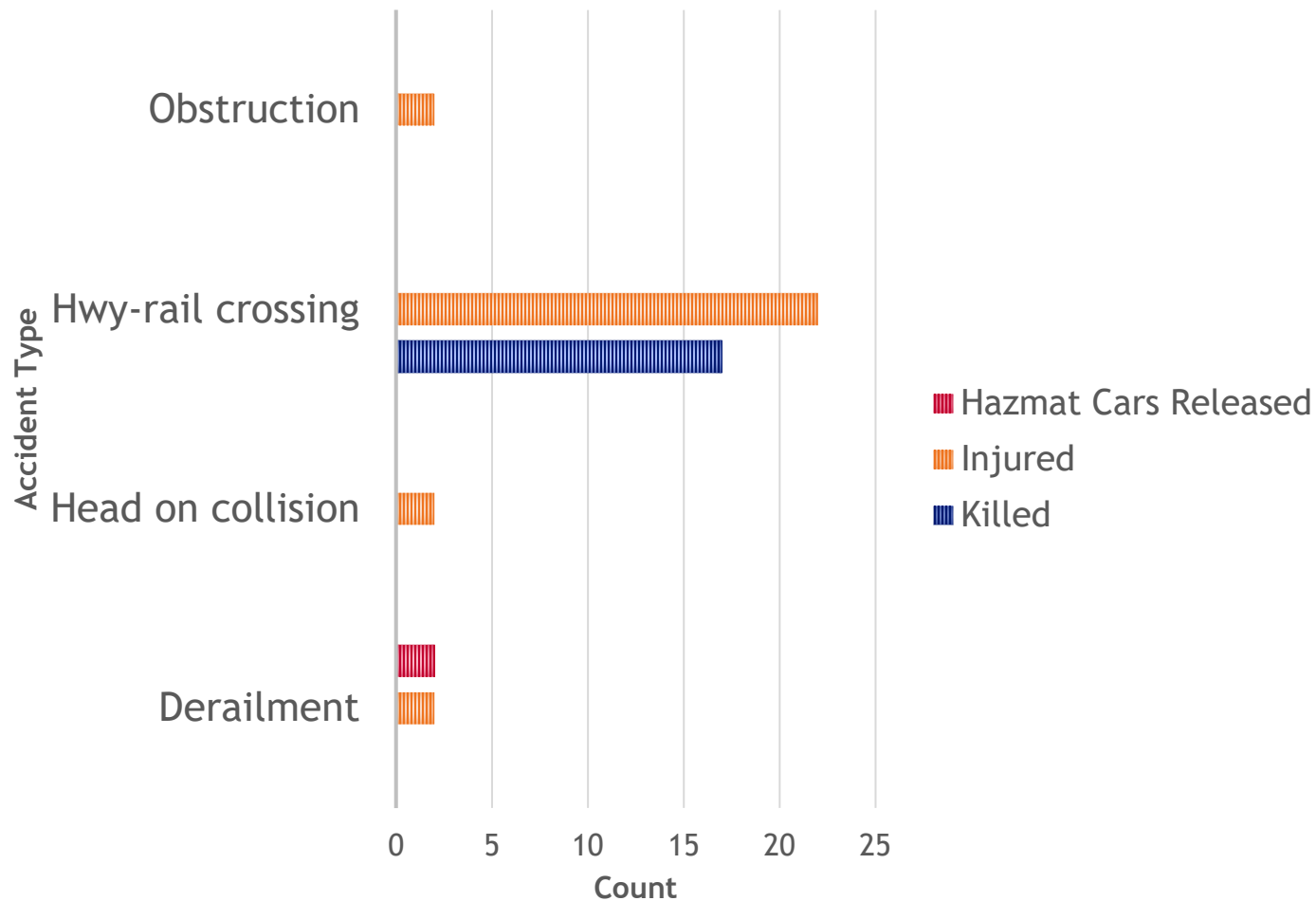


Source: FRA Rail Equipment Accident/Incident Data (Form 54) - June 28, 2023



# Accident Outcomes

## ACCIDENT OUTCOMES - 2013-2023



- Highway-Rail crossing accidents are most significant
- Only 2 hazardous materials releases from rail since 2013
  - One in a yard at low speed
  - Other in LaSalle in 2016

Source: FRA Rail Equipment Accident/Incident Data (Form 54) - June 28, 2023



# Regulatory Authority and Limitations

- Based on Article 1 of the US Constitution - Commerce Clause
  - Holds that regulatory authority for interstate commerce is held and used by Congress
  - Limits and precludes most ability for States to regulate independently

## Regulatory Agencies:

- Surface Transportation Board
  - Commercial aspects and common carrier/inter-railroad disputes
- Federal Railroad Administration
  - Safety and environmental (NEPA) actions
- State role is very limited



# State Agency Role in Rail Safety

## CDOT

- Responsible for interactions of state highways and railroads
- Develops projects within grant programs and other responsibilities
- No specific regulatory authority (relating to rail)

## Public Utilities Commission

- Regulates at-grade crossings statewide

## CDPHE

- Regulates hazardous materials emergencies and responses

## CDPS

- Includes Division of Homeland Security and Emergency Management and Division of Fire Prevention and Control
- Oversees public safety and emergency response to major incidents as a state





# Current Federal Legislation and Regulation

- **Railway Safety Act of 2023 (S.576)**
  - [In Progress]
  - Train length restrictions
  - Requirements for defect detectors
  - Train makeup information provided to emergency responders
  - Two-person crew minimum
  - Expands first responder training
- **Proposed rulemaking (FRA)**
  - [In Progress with rulemaking process]
  - Crew size
  - Passenger car safety
  - Dispatcher certification
  - Fatigue management







# Actions in Progress to Support Safety



Research and  
Development



Grade crossing  
safety



Emergency  
response and  
preparedness



Grant  
programs for  
safety  
improvements



# Research and Development



- Transportation Technology Center
  - World-class research center
  - Located in Pueblo
  - Owned by FRA, operated by ENSCO
- MxV Rail
  - Run by the American Association of Railroads
  - Performs work testing rolling stock, trains, and trains on emergency response
- Opportunities in R&D
  - Crossing safety
  - Train makeup and behavior
  - Defect detection
  - Human factors
  - Emergency management

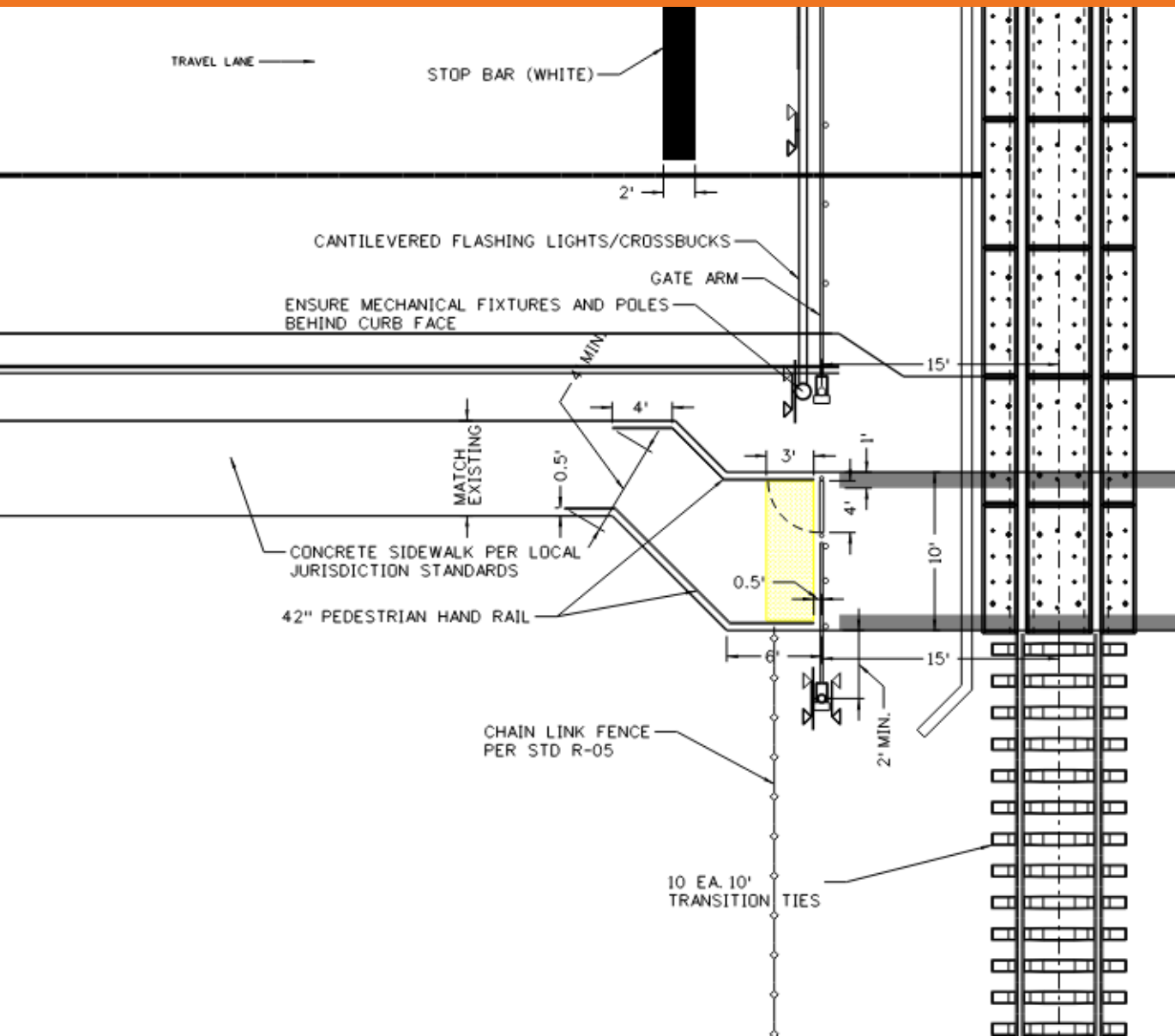


**TRANSPORTATION TECHNOLOGY CENTER**

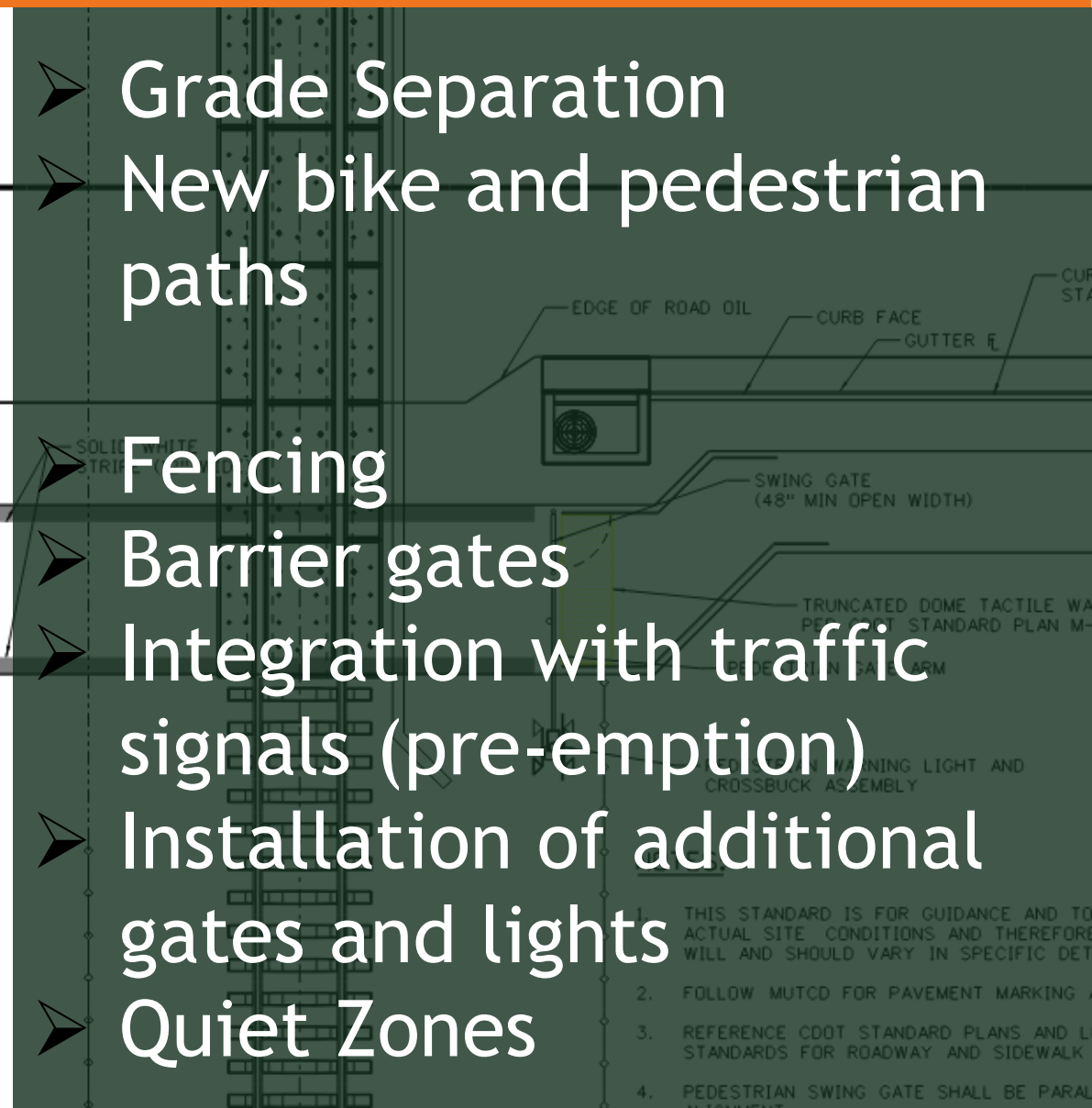


- Current programs support crossing elimination and safety improvements
  - Section 130
  - Federal Grants (Railroad Crossing Elimination, etc)
- Number of grants obtained by CDOT and other partners for grade separation and crossing elimination
- CDOT continuing to pursue these grants statewide

# Example Crossing Safety Mitigations



- Grade Separation
- New bike and pedestrian paths
- Fencing
- Barrier gates
- Integration with traffic signals (pre-emption)
- Installation of additional gates and lights
- Quiet Zones



THIS STANDARD IS FOR GUIDANCE AND TO ACTUAL SITE CONDITIONS AND THEREFORE WILL AND SHOULD VARY IN SPECIFIC DET

2. FOLLOW MUTCD FOR PAVEMENT MARKING
3. REFERENCE CDOT STANDARD PLANS AND L STANDARDS FOR ROADWAY AND SIDEWALK
4. PEDESTRIAN SWING GATE SHALL BE PARAL





- US-85
  - Grade Separations
  - Construction in progress
- US-34
  - Crossing eliminations
  - 2022 CRISI Grant for design and environmental
- Other Safety Improvements



Grade separation project in progress – Weld County Road 44 at US Highway 85



- Railroads already prepare for and respond to emergencies involving their trains
- Supporting local fire and emergency management agencies will likely improve outcomes of incidents
  - Training
  - Exercises
  - Equipment
  - Incident management teams
- Ongoing work continues by Department of Public Safety - DFPC to train responders





# Other Opportunities







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**Thank You!**

07/24/2023