

A graphic featuring a large grey gear with a white outline. Inside the gear, a white semi-truck is driving on a highway, and a freight train is visible in the background. The background is split into red and blue sections.

# Florida Rail Safety Initiatives

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6/16/2022

**FDOT**   **FREIGHT & RAIL**

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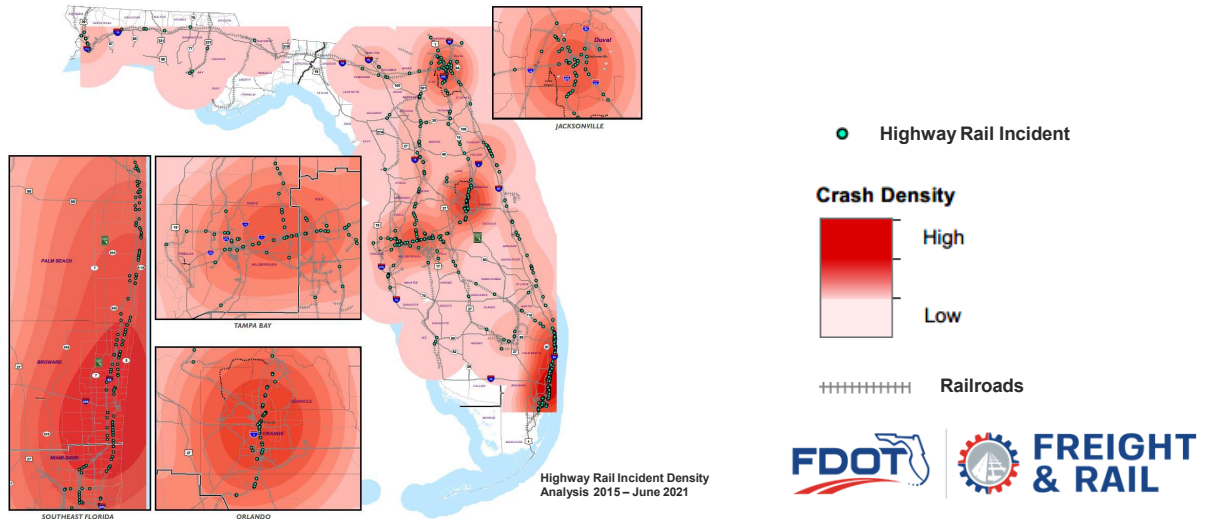
A graphic showing a close-up of a freight train with many colorful containers. The background is split into blue and red sections.

## Defining the Challenge

- Analysis of Hotspots
- Identifying Partners

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## Analysis of Hotspots



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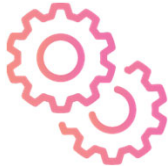
## Identification of Partners



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# Implementation

## FOUR Es OF SAFETY



ENGINEERING



ENFORCEMENT



EDUCATION



EMERGENCY RESPONSE



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## Engineering Solutions

- Section 130 crossing improvements
- Grade Crossing Closure Program
- Dynamic envelope installation
- Preemption signal inventory
- Higher Speed Grade Crossing Design Manual
- 2021 RAISE Grant with Indian River County and Brightline
- Collaborating SRRT anti-trespassing recommendations



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## Educational Efforts

- Operation STRIDE
- Operation Lifesaver
- Media campaigns
- CFRC Task Force
- Partnering with mental health experts
- Safety messages on DMS
- Suicide prevention signage
- FLHSMV driver test collaboration



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## Enforcement

- Rail Safety Week partnerships with local law enforcement at crossings
- Worked to expand Florida Operation Lifesaver Board of Directors to include law enforcement and Brightline



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## Way Forward

- Defining roles and responsibilities
- Building a cohesive vision together
- FDOT and partners, building on current efforts, has developed matrix of safety strategies

### Safety Strategies



Pedestrian Trespassing



Vehicular Trespassing



Traffic Queuing Over Grade Crossings







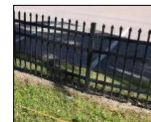
Motorist and Pedestrian Behaviors

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## Mitigation of Pedestrian Trespassing





	OBJECTIVES	MITIGATION STRATEGIES
	Improving pedestrian walkability	<ul style="list-style-type: none"> <li>• New pedestrian crossing</li> <li>• Sidewalk connection</li> <li>• Pedestrian gates</li> <li>• Barrier to keep pedestrians on the sidewalk</li> </ul>
	Preventing illicit activities through better boundaries	<ul style="list-style-type: none"> <li>• FDOT Type B fencing</li> <li>• Hardened fencing</li> <li>• Vegetative barrier</li> </ul>
	Artificial Intelligence monitoring technologies	<ul style="list-style-type: none"> <li>• CCTV</li> <li>• AI for detecting trespassers</li> <li>• Speakers and lights</li> <li>• Transmission of alerts</li> </ul>
	Enhancing lighting for pedestrian visibility	<ul style="list-style-type: none"> <li>• LED streetlight in each grade crossing quadrant</li> </ul>



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## Mitigation of Vehicular Trespassing






	OBJECTIVES	MITIGATION STRATEGIES
	Implement a passive warning system	<ul style="list-style-type: none"> <li>• Continuous pavement markings across the grade crossing</li> <li>• RPMs</li> <li>• Delineators</li> </ul>
	Thwart access to the railroad	<ul style="list-style-type: none"> <li>• Guardrail</li> <li>• Nine button sign</li> </ul>
	Artificial Intelligence monitoring technologies	<ul style="list-style-type: none"> <li>• CCTV</li> <li>• AI for detecting trespassers</li> <li>• Speakers and lights</li> <li>• Transmission of alerts</li> </ul>
	HSR Grade Crossing Design Standards	<ul style="list-style-type: none"> <li>• FDOT At-Grade Railroad Crossings and Corridors for (80-110 mph) Design Criteria and Standards Manual addressing the planning, design, construction, maintenance and operational characteristics associated with highway–rail grade crossings located in Florida</li> </ul>

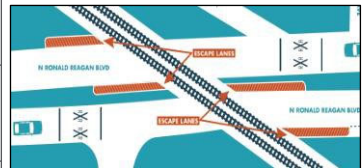
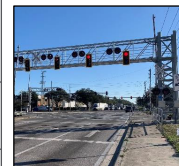


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## Traffic Queued Over Grade Crossings


	OBJECTIVES	MITIGATION STRATEGIES
	Move queued vehicles through downstream traffic signals	<ul style="list-style-type: none"> <li>• Continue to conduct preemption studies, install preemption per Florida Administrative Code 14-57.013(5)</li> </ul>
	Hold traffic upstream of a grade crossing	<ul style="list-style-type: none"> <li>• Pre-signals</li> <li>• Queue cutter signals</li> </ul>
	Warn motorists to not block grade crossings	<ul style="list-style-type: none"> <li>• Sensor-activated LED R8-08 "Do Not Stop On Tracks" signage</li> </ul>
	Allow motorists to escape if stopped by queuing	<ul style="list-style-type: none"> <li>• Escape lanes</li> </ul>
	Restrict downstream vehicle movements on minor roadways with short clear storage distance	<ul style="list-style-type: none"> <li>• No trucks designation</li> <li>• Permit only right turns at downstream intersection</li> <li>• Merge/acceleration lane</li> <li>• Provide stop signs for all intersection approaches except from the grade crossing</li> </ul>



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## Motorist and Pedestrian Behavior

	OBJECTIVES	MITIGATION STRATEGIES
	Bolster public outreach and education programs	<ul style="list-style-type: none"> <li>• Grade crossing safety outreach</li> <li>• Trespass prevention outreach</li> <li>• Suicide prevention training</li> </ul>

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SMART**



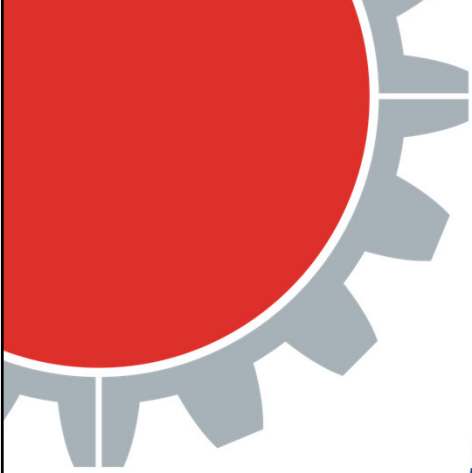
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## Closing

- What are the next steps?
- How do we effectively implement with a diverse group?
- Any other challenges?
- Who else should be included in the effort?


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