



**COLORADO**

Department of Transportation

Using Real-time CMV Data to  
Alert Drivers while Mountain  
Driving in Colorado



# The Mountain Rules Safety Campaign

- In the summer of 2019 CDOT, CSP, and CMCA kicked off The Mountain Rules Safety Campaign.
- This safety campaign is being supported by education and communication efforts, infrastructure and technology enhancements, and collaboration.
- We have worked closely with Colorado State Patrol and a group of Colorado truck drivers to get feedback and build a collaborative and effective campaign.





# Real-Time In-Cab Safety Messaging

## Geo-Fencing Safety Warnings

- We used crash data and our understanding of the corridor to geo-fence safety sensitive locations on the I-70 corridor.
- These messages pop-up on the ELD screen along with an alert tone.
- The messages are mostly icons and there is a calculated effort to limit words so drivers are not focused on the screen for more than a split second.





# In-Cab Alerts

Alert Name	Zone Count	Unique Vehicles	Total Alerts	Alerts Per Vehicle
Brake Check	5	2,245	11,486	5.1
Low Bridge	12	102	181	1.8
Runaway Ramp	13	2,362	11,514	4.9
Steep Grade	5	2,286	11,094	4.9

- In April of 2021, Drivewyze sent nearly 7,000 safety messages to their subscribers as they were traversing the I-70 mountain corridor.
- We continue to seek and receive feedback in a effort to gauge the effectiveness and the appropriate balance on communication.
- Our long-term goal is to provide this safety enhancement to every CMV cab statewide.



# Truck Safety Information Systems



## Truck Safety Information System

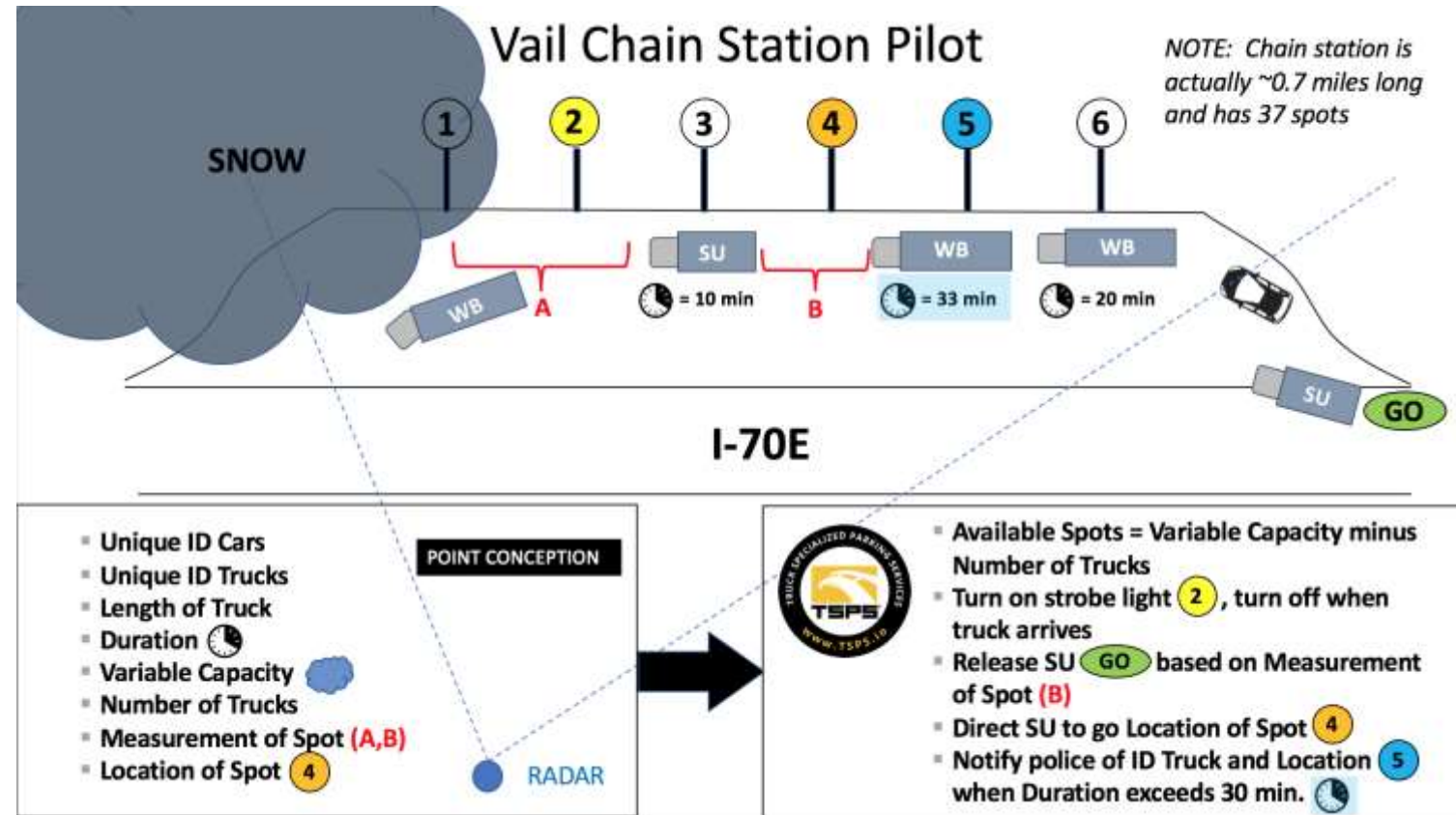
- Lower Straight Creek runaway truck ramp is used approximately 52 times a year.
- We will collect weight information from our Dumont Port of Entry.
- We will then identify the truck as it is approaching the tunnel and run an algorithm to determine safe speed. This will be communicated through a variable message sign and eventually in-cab messaging.



# Chain Station and Corridor Management

## I-70 Chain Station Management

- In heavy snow events, chain stations are inefficient and create operational safety challenges.
- We are using advanced radar sensors supported by AI and camera to direct trucks to open spots.
- Future in-cab notifications to direct each truck to open spots.
- Corridor management tool. Use Dotsero truck parking to stage trucks during storm or event. Use predicative analytics to release trucks.





# The Mountain Rules Truck Safety Video





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Questions?

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