



## COLORADO Transportation Commission

4201 East Arkansas Avenue, Room 270  
Denver, CO 80222-3406

**DATE:** March 14, 2018  
**TO:** Technology Committee  
**FROM:** Amy Ford, Chief of Advanced Mobility  
**SUBJECT:** Informational Update on Autonomous Mobility Task Force

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### Purpose

To inform the Transportation Commission and Technology Committee on the Autonomous Mobility Task Force, which is a group of staff from the Colorado Department of Transportation (CDOT), Colorado State Patrol (CSP), and Colorado Department of Revenue, Division of Motor Vehicles (DOR), who have been meeting monthly since September 2017 to implement SB 17-213 and develop a process to approve testing of autonomous vehicles in Colorado.

### Action

Information only.

### Details

SB 17-213 allowed for testing of autonomous vehicles that could not comply with all applicable federal and state laws if the request to test was approved by CDOT and CSP. SB 17-213 also directed CDOT and CSP to develop a process to approve the testing of autonomous vehicles in Colorado. To implement SB 17-213, CDOT, CSP, and DOR formed an Autonomous Mobility Task Force to meet monthly beginning September of 2017.

The Autonomous Mobility Task Force has developed a process which requests specific information, which aligns with guidance from the National Highway Traffic and Safety Administration (NHTSA), from those seeking approval for testing. To date, the Autonomous Mobility Task Force has received two applications to test: one for the CDOT autonomous attenuator truck, and another for EasyMile's autonomous shuttle on Panasonic's campus at their grand opening on December 4, 2017.

A power point presentation will be used at the Technology Committee workshop to provide more specific information regarding the approval process.

### Attachments

N/A



# Autonomous Mobility Task Force



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**COLORADO**  
Department of Revenue

Colorado Department of Transportation

Colorado State Patrol

Colorado Department of Revenue

*Division of Motor Vehicles*



# SB 17-213: Overview

- Passed in 2017; set foundation for autonomous vehicles
- “Automated Driving System (ADS)” Definition

Hardware and software that are collectively capable, without any intervention or supervision by a human operator, of performing all aspects of the dynamic driving task for a vehicle on a part-time or full-time basis, described as levels 4 and 5 automation in SAE International Standard J3016, as it existed in September 2016.
- Key point:

If an ADS cannot comply with every state and federal law, *the ADS may still be tested in Colorado if approved by CSP and CDOT.*

# SB 17-213: CDOT to Report to TLRC

- Requires CDOT to report to the Transportation Legislation Review Committee by Sept. 1 each year (beginning Sept. 1, 2018) concerning the testing of ADS in Colorado.



# CDOT, CSP, and DOR Collaboration

- Collaborating since 2016 on autonomous mobility
- Continued coordination to form group to work out process as directed under SB 17-213
- Autonomous Mobility Task Force began meeting monthly September 2017





# Autonomous Mobility Task Force

- Policy direction for autonomous mobility in Colorado
- Monitor National Highway Transportation Safety Administration (NHTSA), federal, other states' rules and regulations
- Per SB 17-213, develop process & provide approval when ADS cannot comply with every state and federal law that applies to the function that the system is operating
- Act as resource / clearinghouse, collaborating on process, experiences with other states, stakeholders and industry



# Responsibilities

## ESTABLISH:

- Clear checklist of expectations, submittals, coordination with entity (*Checklist tracks current guidance from NHTSA*)
- Template with any required insurance provisions
- Working agreement with entity on expectations for testing, any assumptions of liability
- Establish expectations for coordination with other entities and jurisdictions

## ISSUE:

- Final approval of testing on Colorado roads

# Membership

- Staff from each agency, representing legislative affairs, various other operations, deputy director or deputy chief, attorneys from the Attorney General's Office
- Other participants invited for specific issue expertise as needed



# Decision-Making and Final Approval

- Decision-making by consensus
- Task Force coordinates with local jurisdictions (including city government and law enforcement) during possible deployments
- Final approval authority is with CDOT Deputy Director and CSP Deputy Chief



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# General Approval Process

- Entity indicates interest in testing ADS in Colorado
- Task Force provides checklist for ADS test expectations
- Entity applies to Task Force by submitting information requested in checklist
- Task Force considers application—including inviting entity representatives to engage with Task Force representatives
- CSP & CDOT coordinate with entity to observe safe operation of ADS
- CDOT verifies insurance; DOR completes licensing
- Task Forces makes recommendation for final signatures



# Autonomous Driving Checklist

- Operational Domain  
*Operating parameters and limitations of ADS, Object and Event Detection and Response, requested testing*
- Safety Assessment Certification
- Driver Certification  
*Certify the applicant's driver testing and training program specific to the ADS*
- Vehicle Certification  
*(Identify each vehicle in test by VIN, year, make, model, type, other unique identifiers)*
- Insurance Certification



## Example: EasyMile Test (12.4.2017)

<b>Submission Date</b>	November 2, 2017
<b>Company/Person</b>	EasyMile Inc.
<b>Business Address</b>	6144 Panasonic Way, Denver CO 80249
<b>Primary Contact</b>	Lauren Isaac, Director of Business Initiatives
<b>Vehicle Name</b>	EZ10
<b>Vehicle Description</b>	Autonomous shuttle which may be controlled by operator
<b>Testing Duration</b>	December 4, 2017 from 4–6pm



**Thank You**