



**DATE:** March 29, 2017

**TO:** Senate Committee on Business and Transportation

**FROM:** Travis Brouwer, Assistant Director  
Oregon Department of Transportation

**SUBJECT:** SB 981 – Automated Vehicles

## INTRODUCTION

Senate Bill 981 establishes a procedure for automated vehicle manufacturers to submit a certificate of compliance to the Oregon Department of Transportation (ODOT). The certificate of compliance must include proof that the vehicle complies with state and federal laws, that it captures collision data, and has seating capacity for two to five passengers. The certificate will also include the geographical boundaries in which the automated vehicle will operate, proof of insurance up to ten million dollars, and certification that the vehicle complies with applicable Federal Motor Vehicle Safety Standards. Manufacturers must also submit collision data to ODOT and Oregon State Police. Under this proposal, ODOT would not have the authority to deny or ask for modifications to the manufacturer plans. Lastly, this bill preempts local governments from enacting any law or ordinance to regulate automated vehicles.

## BACKGROUND

Over the past several years, there has been tremendous momentum in the development of automated vehicle technology. We see stories daily about tech companies and vehicle manufactures making major investments in automated vehicles. Intel, a company with a major presence in Oregon, recently announced a \$15.3 billion deal to buy Mobileye, a company that produces cameras and sensors used in automated vehicles.

The term “automated vehicles” refers to vehicles with high levels of automation, where a computer system can perform the entire driving task in at least some circumstances. Some automated vehicles may require a human driver in certain situations—such as dense city driving or in inclement weather—while others may be completely driverless.

The Society of Automotive Engineers has defined levels of automation that distinguish between vehicles with different capabilities. The levels range from Level 0, at which the car has no automated features, up to Levels 4 and 5, fully automated vehicles. For example, a Level 2 automated vehicle would have a combination of driver assistance features such as adaptive cruise control and lane keeping control. In Level 3, the vehicle is able to perform all driving functions, including monitoring the driving environment, under certain situations. A human driver would need to take control from the Level 3 vehicle in situations the autonomous system was unable to navigate. In Levels 4 and 5, the vehicle handles all aspects of driving and monitoring the environment, and a driver does not need to be present. These fully automated vehicles may not even be equipped with steering wheels or pedals.

## **DISCUSSION**

With the automated vehicle industry expanding quickly, ODOT is taking steps to strategically prepare for these vehicles to safely operate on our streets. ODOT has convened a Connected and Automated Vehicle Steering Team to coordinate within the agency and hired a policy advisor to help ODOT as it evaluates automated vehicles and begins developing policy.

Last September, the National Highway Traffic Safety Administration (NHTSA) issued policy guidance for states exploring regulatory options for automated vehicle testing. The NHTSA Federal Automated Vehicles Policy is meant to promote a unified and consistent approach to automated vehicle testing across jurisdictions, and will help Oregon align its automated vehicle policy and regulations with other states and national efforts. ODOT has found this policy guidance helpful and believes implementing many of its guiding principles would be beneficial for Oregon.

The NHTSA guidance suggests that each state establish a lead agency responsible for overseeing automated vehicle testing within the state. Given the leadership role in transportation safety and mobility, ODOT could be the natural fit to be designated lead agency.

NHTSA also recommends that each state create a Jurisdictional Automated Safety Technology Committee (JASTC). As envisioned in the NHTSA guidance, the JASTC would include representatives from the Governor's Office, relevant state agencies including ODOT, Oregon State Police, Department of Justice, state insurance regulators, state offices representing the aging and disabled communities, and representatives from local jurisdictions across the State. ODOT envisions the goals of the JASTC could be threefold. The JASTC could coordinate with other jurisdictions and track the progress of automated vehicle development nationwide, advise on implementation of a temporary automated vehicle testing pilot program that would allow ODOT to oversee testing, and work to develop regulatory recommendations for eventual full-scale automated vehicle deployment.

When discussing automated vehicles, it is important to distinguish between testing and deployment. Automated vehicle testing will involve a small number of vehicles operated by professionally trained human drivers. Commercial deployment of automated vehicles could result in a transformational change to our transportation network and may involve a large-scale fleet of completely driverless vehicles that has much larger consequences for the transportation system. The pilot program mentioned above would apply only to testing. Determining a regulatory approach for full deployment will require gathering more information as the technology matures.

Senate Bill 981 contemplates full-scale deployment without allowing government agencies and industry to gather information in a testing phase where professional human driver is monitoring the technology. If this bill were to become law, driverless automated vehicles would be deployed on public roads and the State would have no authority to set limits on the parameters of deployment. ODOT believes a phased approach that addresses testing before full deployment would be prudent.

Senate Bill 981 does allow ODOT to create a few procedures through rules: a process for submitting a certificate of compliance, a process for providing notice of geographic boundaries for automated vehicle deployments, and fees necessary to cover operating expenses. However, ODOT would not be able to request modifications to the manufacturer's deployment plans, even if there were safety or operational concerns. ODOT would not have the ability to mitigate negative impacts that automated vehicles may have when deployed at a large scale.

## **SUMMARY**

Senate Bill 981 allows automated vehicles to operate on public roadways so long as they provide limited information to ODOT. As the technology of automated vehicles advances rapidly, it would be beneficial for the State to proactively set uniform criteria for automated vehicle testing and continue to gather information from automated vehicle companies before embracing full-scale deployment. Accordingly, ODOT could be designated as the lead agency to oversee the safe testing of automated vehicles in Oregon. ODOT could then lead the effort to create a Jurisdictional Automated Safety Technology Committee to coordinate across state and local governments, and oversee a pilot program for automated vehicle testing.