

The logo for the Eno Center for Transportation, featuring the word "Eno" in a bold, blue, sans-serif font. The letters are contained within a white square that is itself set against a larger blue square background.

Center for  
Transportation

# AUTOMATED VEHICLES AND PUBLIC POLICY

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# Potential Impacts of AVs

Automated vehicles (AVs) could transform mobility networks by:

- Dramatically improving safety
- Reducing emissions
- Providing access and mobility to underserved populations
- Encouraging suburban sprawl
- Increasing congestion
- Adding greenhouse gas emissions
- Increasing the cost of driving

Putting the right public policy in place now will help ensure that the transportation system of the future is safer, more equitable, and more efficient

## AREAS FOR POLICY, PLANNING, AND ENGINEERING CONSIDERATIONS

- Definitions
- Liability
- System Safety Certification
- State Testing Permits
- Local AV Pilots
- Cybersecurity
- Data Management and Sharing
- Infrastructure Investment
- Connected Vehicles
- Funding
- Planning
- Traffic Laws
- Workforce
- Oversight Groups
- Outstanding AV Issues
- Government Investment in Research

# Levels of Automation and System Safety Certification

- **Level 0 and 1:** No change required
- **Level 2:** Must include a driver monitoring and enforcement system that ensures that the driver continues to supervise and monitor the environment
- **Level 3:** NHTSA must certify all Level 3 driving systems and create standards for the transfer of control from the ADS to the human driver and vice versa
- **Level 4:** NHTSA must certify Level 4 driving systems. This should also include any remote-controlled operation of the vehicle. There does not need to be a licensed human driver in the vehicle if only operating in its certified driving environment. For level 4 driving systems that operate the vehicle for only part of any given trip (e.g., only on freeways in dense traffic), NHTSA should require the presence of a licensed human driver at all times
- **Level 5:** NHTSA must certify Level 5 driving systems. This should also include any remote-controlled operation of the vehicle. There does not need to be a licensed human driver in the vehicle

# Federal System Safety Certification

- Federal Motor Vehicle Safety Standards govern the design, construction, and performance of vehicles
- FMVSS cover prescriptive standards such as steering wheel size, pedal configuration, antilock brake systems, etc.
- Automakers can apply for exemptions, but have to demonstrate that the exempted vehicle is safer



# Local Considerations

- Testing, environmental, traffic, and speed conditions under which the AV will operate
  - Establishment of model data sharing agreements to enhance local transportation planning and operations
  - Galvanization of support for robust state of good repair programs that target unsafe roadways and work zones
  - Example: in MI, cities are prohibited from imposing local fees or regulations on AV pilot projects until after December 21, 2022 to prevent local barriers to entry
- 6% of local plans consider potential effect of driverless tech
  - 20% of local plans include reducing road capacity or long-term maintenance costs

*Source: NLC, 2016*

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# QUESTIONS

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