Future Interstate Study: Safety

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About Advocates

A coalition of public health, safety, and consumer organizations, insurers and insurance agents.

We promote highway and auto safety through the adoption of safety laws, policies and regulations.

We are a unique coalition dedicated to advancing safer vehicles, safer drivers, and safer roads.
The Road Ahead

• Interstate Highway Safety

• Specific Topics
  – Automated driving and smart highways
  – Equity Issues: Access to safe Interstate mobility
  – Truck Platooning
Interstate Highway Safety

• 35,092 Fatalities in 2015

  – Interstates 4,432 (12%)

  • Rural 1,918

  • Urban 2,424
Interstate Highway Safety

• Fatalities are increasing
  – 37,461 fatalities in 2016 (up 5.6 percent)
  – This is after an 8.4 percent increase from 2014 to 2015
Interstate Highway Safety

• The Role of the Road in Safety

  – Design: curvature, sight distance

  – Laws: speed limits, passing lanes

  – Safety Technology: barriers

  – Maintenance: Pavement condition
Interstate Highway Safety

• What is the common thread...
Interstate Highway Safety

• The Role of the Future Interstate
  – Autonomous Vehicles: sight distances, marking, signage
  – Platooning: grades, bridges, truck size and weight
  – Connectivity: vehicle to infrastructure (V2X)
Interstate Highway Safety

• Facilitate and encourage uniformity in design and implementation across the interstate system.

• Consider the short and long term predictions for safety technology relative to the design and maintenance cycles.

• Review and update design principles as necessary to comport with new analyses (85% speed).
Specific Topics

- Automated Driving and Smart Highways
- Platooning
- Equity
Automated Driving and Smart Highways

• The AVs are coming
  – VMT, fleet size, ownership, congestion

  – Technology requirements
    • Machine vision, conflicting sensors

  – Fleet mix of SAE Levels, humans and machines

  – Big Data
Automated Driving and Smart Highways

- Remember that changing role
  - Interstates as a AV target
    - Uniform, limited access
  - V2X: V2V rulemaking
    - DSRC vs. 5G / LTE
Platooning

• Predicted future freight demands are enormous

• Platooning offered as a solution
  – Fuel savings, reduce congestion

• But what about safety?
  – Reliant on other technologies such as automated braking
  – Interacting with other vehicles (merging, passing)
Platooning

• What about impacts on the road?
  – Truck size and weight interaction
  – Road design
  – Network design
    • Rest Stops, distribution centers, access
Equity

• Accessibility to mobility has been a big selling point for AVs / Smart Roadways
  – Independence
  – Opportunity

• Without controls however
  – Leave most vulnerable stranded
Recommendations

• Support regulation of AV technology
• Support fleet wide adoption of technology presently available
  – ADAS: crash imminent braking, LDW, Blindspot
• Support V2X
• Include interaction of coming safety technology in design of the future interstate
• Get ready for big data
Thank you

• Advocates for Highway and Auto Safety
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