Brief Summary of USDOT's

Preparing for the Future of Transportation

The U.S. Department of Transportation (USDOT) on October 4 issued its eagerly awaited publication, *Automated Vehicles 3.0: Preparing for the Future of Transportation*. The document "advances U.S. DOT's commitment to supporting the safe, reliable, efficient, and cost-effective integration of automation into the broader multimodal surface transportation system." According to USDOT, AV 3.0 "builds upon—but does not replace— voluntary guidance provided in *Automated Driving Systems 2.0: A Vision for Safety*." There are selected instances where prior guidance has been updated, but in general the information in V 2.0 remains valid today.

The premise of AV 3.0 is focused on six automation principles identified by USDOT:
1. Prioritize safety.
2. Remain technology neutral.
3. Modernize regulations.
4. Encourage a consistent regulatory and operational environment.
5. Prepare proactively for automation.
6. Protect and enhance the freedoms enjoyed by Americans.

PLANNED ACTIONS FROM THE FEDERAL GOVERNMENT

— The National Highway Traffic Safety Administration (NHTSA) plans to seek comment on proposed changes to specific Federal Motor Vehicle Safety Standards (FMVSS) to accommodate automated vehicle technologies and the possibility of establishing exceptions to certain standards (e.g., interior configured without human controls).

— NHTSA intends to seek public comment on a proposal to streamline and modernize procedures the agency will follow when processing and deciding FMVSS exemption petitions.

— The Federal Motor Carrier Safety Administration will initiate an Advanced Notice of Proposed Rulemaking to better understand areas of responsibility between the federal and state governments in the context of automated driving system-equipped commercial motor vehicles and commercial carriers.

— The Federal Highway Administration will pursue an update to the 2009 Manual on Uniform Traffic Control Devices that will take into consideration these new technologies and other needs.

— The Federal Transit Administration is not proposing a one-size-fits-all approach or providing a paper checklist for safety certification, but will work with transit agencies to provide tailored technical assistance to ensuring safe testing and deployment of vehicle automation.

— The USDOT will partner with other federal cabinet agencies on a comprehensive analysis of workforce impacts from automated vehicles, and research toward improving the mobility of travelers. with disabilities.

NOTABLE UPDATES FROM V 2.0

— Includes a new section on **Cooperative Automation and Connectivity**. Over the past 20 years, the USDOT has invested over $700 million in research and development of vehicle-to-everything (V2X) communication through partnerships with industry and state/local governments. USDOT encourages the automotive industry, wireless technology companies, infrastructure owners/operators, and other stakeholders to continue developing technologies that leverage the 5.9 GHz spectrum for transportation safety benefits. USDOT does not promote any particular technology over another.

— Removes the former **Automated Vehicle Proving Grounds** designations. The USDOT no longer recognizes the designations of 10 "Automated Vehicle Proving Grounds" as announced on January 19, 2017. If USDOT is called upon to provide support with regard to automated vehicle proving grounds, it intends to apply neutral, objective criteria and to consider all locations in all states where relevant research and testing activities are under way.

— Publicizes efforts to develop a **Work Zone Data Exchange**. The USDOT has been working with several state transportation agencies and private companies to develop a harmonized specification for work zone data that infrastructure owners and operators can make available as open feeds that automated vehicles and others can use. They seek to define the core data elements that should be included in an initial work zone specification and to determine what types of technical assistance the data producers will need.

— Introduces the **Safety Risk Management Stages**, which describes an illustrative framework of safety risk management stages along the path to full commercial integration of automated vehicles. This framework promotes the benefits of safe deployment while managing risk and provides clarity to the public regarding the distinctions between various stages of testing and full deployment. The framework establishes USDOT's position that automated driving system development does not start with public road testing, but acknowledges the need for on-road testing to build statistical confidence in matured software and hardware within the intended operational environments.

PUBLIC SECTOR IMPLICATIONS

In addition to the best practices identified in its previous iteration, AV 3.0 provides public agency officials with several new advice and guidance statements.

— Advice to State Departments of Transportation and Infrastructure Owners/Operators (pages 18-22)
  — Adopt terminology defined through voluntary technical standards
  — Assess state roadway readiness
  — Consider test driver training and licensing procedures for test vehicle
  — Support safe testing and operations of automated vehicles on public roadways
  — Learn from testing and pilots to support highway system readiness
  — Build organizational capacity to prepare for automated vehicles in communities
  — Identify data needs and opportunities to exchange data
  — Support scenario development and transportation planning for automation

— Advice to Commercial Vehicle Enforcement Agencies (page 22)
  — Compatibility between intrastate and interstate commercial motor vehicle regulations
  — Continued application of roadside inspection procedures

— Transit Agencies (page 22)
  — Needs-based implementation
  — Realistic expectations
  — Workforce and labor
  — Accessibility
  — Engagement and education

— Local Governments (pages 24-25)
  — Facilitate safe testing and operation of automated vehicles on local streets
  — Understand the near-term opportunities that automation may provide
  — Consider how land use, including curb space, will be affected
  — Consider the potential for increased congestion, and how it might be managed
  — Engage with citizens

PRIVATE SECTOR IMPLICATIONS

Automated Driving Systems 2.0: A Vision for Safety provided voluntary guidance to private sector stakeholders regarding the design, testing and safe deployment of automated driving systems. It also re-introduced the Voluntary Safety Self-Assessment (VSSA).

USDOT continues to encourage (but not require) entities to make their VSSA available publicly to promote transparency and strengthen public confidence in automated driving system technologies. NHTSA has established a website where entities that have disclosed and made the agency aware of their VSSAs are listed in one central location.

In addition to the best practices identified in V 2.0, USDOT also provides private sector representatives with a number of new advice and guidance statements. Among the new updates are items such as:

— Incorporate new safety approaches for automation in commercial vehicle operations
— Develop safe and accessible transit buses and applications
— Provide information to the public
— Work with all potential user groups to incorporate universal design principles

— Anticipate human factors and driver engagement issues
— Identify opportunities for voluntary data exchanges
— Contribute to the development of voluntary and performance-oriented technical standards
— Adopt cybersecurity best practices
— Engage with first responders and public safety officials

GENERAL OBSERVATIONS

AV 3.0 reaffirms USDOT's reliance on a self-certification approach as the way to balance and promote safety and innovation. But it is much more comprehensive than V 2.0, incorporates key industry input, provides a broader set of guidance for the industry, and frequently encourages all parties to use USDOT as a facilitator for dialogue among the various stakeholders and industries. The value placed on dialogue and inclusion is an important component and is evident throughout this updated document.

CONNECTED AND AUTOMATED VEHICLE TECHNOLOGY EXPERTISE

WSP is at the forefront of the development and testing of transportation infrastructure for connected and automated vehicles, and is currently advising transportation agencies across the U.S. on the development and implementation of infrastructure and policies to proactively plan for these vehicles of the future. Our experts are available to provide more in-depth briefings on this new policy, including its implications on state and local governments.

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wsp.com

CONTACT US

ADVANCINGTRANSPORT@WSP.COM

WSP USA
ONE PENN PLAZA
NEW YORK, NY 10119
+1-212-465-5000

ADVANCINGTRANSPORT.COM