

POLICY STATEMENT



ASSOCIATION OF PEDESTRIAN
& BICYCLE PROFESSIONALS

Expertise for Active Transportation



POLICY STATEMENT: AUTOMATED VEHICLES

Overview of APBP Policy Statements

The Association of Pedestrian and Bicycle Professionals (APBP) supports the community of professionals working to create more walkable, bikeable places through facilitating the exchange of professional and technical knowledge and by promoting fundamental positions that are broadly acknowledged and acted upon by APBP members.

APBP Policy Principles:

1. APBP represents the professional expertise and practical experience of its members in transportation policy discussions to advance active and healthy communities.
2. APBP endorses active transportation as an integral part of transportation systems through all stages of planning, design, funding, and implementation.
3. APBP supports connected, convenient, and safe streets and pathways in every community and planning with the input of every member of a community.
4. APBP advances street designs that make walking and bicycling a viable option for everyone in every place.

Position:

APBP believes automated vehicles represent an emerging technology that carries with it great potential for both positive and negative outcomes, but must be designed and operated to ensure functional safety for all people using streets and highways. AV's must readily detect and protect people walking and bicycling – regardless of age, ability, location, time of day, and other factors – from serious injury or death. The Association of Pedestrian and Bicycle Professionals (APBP) supports:

- Public agencies establishing minimum performance standards for detection and reaction capabilities of Automated Vehicle (AV) technologies
- Enhancing testing and regulation, including implementation of policies that emphasize actions to improve safety for people walking and biking
- Reducing, or eliminating, the number of AVs allowed exemptions from safety standards
- Requiring safety regulations for all AVs, regardless of the level of automation

- Establishing a public database of limitations, capabilities, and safety evaluation reports to increase consumer awareness of AV performance

APBP recognizes an AV system that relies upon vehicle-to-vehicle or vehicle-to-infrastructure communications could adversely affect people walking and biking. APBP believes that reliance on such technologies would shift the burden of avoiding a crash to the most vulnerable road users and give rise to serious equity concerns. The burden of detecting and reacting to people walking and biking should rest entirely on AVs and the associated physical and technological infrastructure and should not require that people walking or biking carry any device.

APBP endorses the work of the Advocates for Auto and Highway Safety and supports their position on AV testing and regulation. Specifically, that a vision test should be required and “in order for an AV to properly interact with its surrounding environment, it must not only detect other vehicles and roadway infrastructure but also other participants using our nation’s transportation systems such as pedestrians, bicyclists, wheelchair users, construction workers in work zones, first responders providing assistance after crashes, and law enforcement officers directing traffic.”

Immediate and long-term impacts deserve careful consideration and must be oriented to strengthen streets as human environments that support safe, sustainable, healthy, and equitable outcomes. This necessarily means using automated vehicle technology to halt and reverse the deadly impact of car-first design upon the walking and bicycling environment.

Definition:

According to the National Highway Traffic Safety Administration (NHTSA), automated or autonomous vehicles are those in which operation of the vehicle occurs without direct driver input to control the steering, acceleration, and braking and are designed so that the driver is not expected to constantly monitor the roadway while operating in self-driving mode.

Society of Automotive Engineers (SAE) identifies six levels of automation, from zero to five. Each succeeding level of automation builds increasing vehicle connectivity and autonomy functionality.

- 0 No Automation
- 1 Driver Assistance
- 2 Partial Automation
- 3 Conditional Automation
- 4 High Automation
- 5 Full Automation

Application:

Many new vehicles and aftermarket systems are already at Level 2 and approaching Level 3 with Advanced Driver Assistance Systems (ADAS). Some experts estimate 80% of vehicles will have connected car features by the year 2020 and be fully automated by 2050. Other experts think full autonomy will never be achieved. Regardless of the extent and timeframe of AV adoption, there is an urgent need to continue making safety part of the street fabric. We have the tools we need to eliminate traffic-related injuries and fatalities and we

shouldn't wait to prioritize safety over speed. Until technology proves otherwise, the basics of Complete Streets design remain the same.

Recommendations:

In preparation for deployment of automated vehicles, APBP recommends:

- Take a [Complete Streets](#) approach to roadway design
- Establish and implement a [Vision Zero](#) policy or approach
- Explicitly make pedestrian and bicyclist safety a governing principle of AV development, testing, and operation
- Establish federal safety requirements for detecting and reacting to bicyclists, pedestrians, and other vulnerable users prior to further testing or operational deployment of AVs on public roadways
- Preserve the ability of state and local governments to set policy and laws governing the testing and licensing of AVs on public roadways
- Work with other agencies to unify around a set of policy requests and create a protocol for AVs that may include data ownership, crash reporting, transit protections, prohibitions on empty circling vehicles, speed limits
- Create an automated vehicle design advisory team to provide oversight of automated vehicle testing and deployment

APBP also supports recommendations developed by industry experts, including Advocates for Auto and Highway Safety, to establish guidelines for interactions with Automated Vehicles.

Resources:

- U.S. Department of Transportation Federal Automated Vehicles Policy (September 2016)
<https://www.transportation.gov/AV/federal-automated-vehicles-policy-september-2016>
 - USDOT's 116-page policy covers:
 - Vehicle Performance Guidance for Automated Vehicles
 - Model State Policy
 - NHTSA's Current Regulatory Tools
 - New Tools and Authorities
- The American Vision for Safer Transportation Through Advancement of Revolutionary Technologies. S. 1885 — 115th Congress: AV START Act." (April 6, 2018).
<https://www.govtrack.us/congress/bills/115/s1885>
- Advocates for Auto and Highway Safety AV START Act Summary with Advocates Positions (October 2017). <http://saferoads.org/wp-content/uploads/2017/10/AV-Start-Act-Summary-With-Advocates-Positions.pdf>
- National Highway Safety Association Automated Vehicles for Safety.
https://www.nhtsa.gov/technology-innovation/automated-vehicles?utm_source=bing&utm_medium=cpc&utm_content=automatedvehicle&utm_campaign=av-17-18
- American Planning Association Principles for Automated Vehicle Policy (January 26, 2018).
<https://www.planning.org/policy/principles/av/>

- National Association of City Transportation Officials Blueprint for Autonomous Urbanism (2017). <https://nacto.org/publication/bau/>
 - National Association of City Transportation Officials Policy Statement on Automated Vehicles (June 23, 2016) <http://nacto.org/wp-content/uploads/2016/06/NACTO-Policy-Automated-Vehicles-201606.pdf>
 - Pedestrian and Bicycle Information Center Discussion Guide for Automated and Connected Vehicles, Pedestrians, and Bicyclists. http://www.pedbikeinfo.org/pdf/PBIC_AV.pdf
 - Federal Highway Administration Environmental Justice Considerations for Automated and Connected Vehicles. https://www.fhwa.dot.gov/environment/environmental_justice/publications/cv_av/index.cfm
 - MIT News on autonomous vehicles <http://news.mit.edu/topic/autonomous-vehicles>
 - APBP Statement in Response to Automated Vehicle Pedestrian Fatality (March 23, 2018). <https://apbp.site-ym.com/general/custom.asp?page=Policy>
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APBP's policy statement development process/member participation

The Association of Pedestrian and Bicycle Professionals (APBP) relied on widely available information to draft this policy statement on automated vehicles.

APBP sought comments on a draft policy statement from its Policy and Legislation Section members. APBP's Board of Directors approved the policy statement on April 19, 2018. APBP members can suggest changes to any policy statement by contacting the association's executive director, policy committee chair, or board member. For more information, contact: Melanie Bowzer, Executive Director, at mbowzer@amrms.com.