UCP Support SB 949 Autonomous Vehicles.pdf
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Position: FAV

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ucp.org

March 3, 2025

Testimony Supporting Senate Bill 949: Vehicle Laws - Fully Autonomous Vehicles

Dear Chairman, Korman, and members of the Environment and Transportation Committee:

I strongly support SB 949, which authorizes autonomous vehicles on Maryland roads. For 75 years, United Cerebral Palsy has served people with cerebral palsy (CP) and a wide range of other neurodevelopmental disabilities, along with their families and communities across the U.S. and Canada. UCP provides services and programs for people with Down Syndrome, autism spectrum disorder, traumatic brain injury (TBI), and other intellectual and developmental disabilities. We provide services and support at a local and regional level while working at a national level to initiate change and advocate for adults and children with disabilities.

Many UCP affiliates offer housing, therapy, family support, employment assistance, early intervention programs, and much more. UCP affiliates rely on people being able to travel to receive the services they need. While many people with disabilities can drive, some are not, and some have days when physical challenges can be wholly debilitating. For the families and caregivers of people with severe disabilities, transportation to and from hospitals and service providers can be a significant burden.

As an organization dedicated to improving the lives of individuals with disabilities, United Cerebral Palsy (UCP) recognizes the significant potential of self-driving vehicles to increase transportation independence. Many people with disabilities face significant challenges accessing reliable and convenient transportation, and autonomous vehicles offer a promising solution.

By removing the requirement for a driver's license, autonomous vehicles decouple the ability to travel independently from the physical ability to drive. This not only expands transportation options but also opens employment opportunities for individuals whose disabilities may prevent them from obtaining a driver's license but who are otherwise qualified for various jobs. Increased access to transportation allows individuals with disabilities to more easily access work, education, medical appointments, and other essential activities, fostering greater inclusion and independence.

I urge you to support SB 949 and help make Maryland a more inclusive and accessible state for all its residents.

Sincerely,

Armando Contreras

Armando Contreras
President and CEO
United Cerebral Palsy

SB0949_FAV_MTC_Vehicle Laws - Fully Autonomous Veh

Uploaded by: Drew Vetter

Position: FAV

MARYLAND TECH COUNCIL
ADVANCING LIFE SCIENCES AND TECHNOLOGY

Senate Judicial Proceedings Committee
March 5, 2025
Senate Bill 949 – *Vehicle Laws – Fully Autonomous Vehicles*
POSITION: SUPPORT

The Maryland Tech Council (MTC), with over 800 members, is the State's largest association of technology companies. Our vision is to propel Maryland to be the country's number one innovation economy for life sciences and technology. MTC brings the State's life sciences and technology communities into a united organization that empowers members to achieve their goals through advocacy, networking, and education. We submit this letter of support for Senate Bill 949 on behalf of MTC.

MTC supports the intent of this legislation to establish a regulatory framework for the operation of autonomous vehicles (AVs) in Maryland. This legislation represents a critical step toward fostering innovation, ensuring public safety, and positioning Maryland as a leader in emerging transportation technologies. Autonomous vehicles have the potential to revolutionize transportation by improving safety, reducing congestion, and expanding mobility options for underserved communities. With advancements in artificial intelligence, sensor technology, and vehicle automation, AVs can significantly reduce human error, which is a leading cause of roadway accidents. A clear regulatory structure will provide certainty for companies investing in this technology, while ensuring appropriate safety and operational guidelines are in place to protect Maryland residents.

By establishing a framework for AV testing and deployment, Maryland will attract technology companies, manufacturers, and investors looking for a supportive environment to develop and deploy these transformative solutions. This legislation will also help create high-quality jobs in the state's technology and automotive sectors, strengthening Maryland's economy and competitive standing in the region. We request a favorable report.

For more information call:
Andrew G. Vetter
J. Steven Wise
Danna L. Kauffman
Christine K. Krone
410-244-7000

SB 949 Waymo FAV.pdf
Uploaded by: Gregory Rogers
Position: FAV

WAYMO

Testimony in Support of Senate Bill 949: Vehicle Laws - Fully Autonomous Vehicles
March 5th, 2025

Chair Smith and distinguished members of the Judicial Proceedings Committee, it is my pleasure to come before you. My name is Greg Rogers. I serve on the State Policy Team at Waymo, and I am also a resident of Takoma Park, Maryland.

Today I'm offering testimony in favor of Senate Bill 949: Vehicle Laws - Fully Autonomous Vehicles. If enacted, this bill would authorize the use of autonomous vehicles on Maryland's roads.

Waymo is a fully autonomous driving technology company with a mission to be the world's most trusted driver. Today, we operate Waymo One, our fully autonomous ride-hailing service, in Phoenix, San Francisco, Los Angeles and Austin. We will also launch in Atlanta this year, and Miami in 2026.

With a few swipes on their phone, riders in these cities can hail a fully autonomous Waymo One ride – with no one behind the wheel – through an app on their phone. We provide more than 200,000 such trips to paying riders every week in these cities, and the Waymo Driver, the technology that powers it all, drives over one million miles on a weekly basis. To put that in perspective, it would take an average American driver 75 years to drive the mileage that the Waymo Driver does each week.

This amazing progress didn't happen overnight. Over the past 15 years, Waymo has worked tirelessly to develop and build the Waymo Driver to be the world's most experienced driver. We are incredibly proud of the safety record we have achieved.

Over 33 million miles of passenger operations, the data show the Waymo Driver is reducing the frequency and severity of collisions where we operate. Specifically, the Waymo Driver has lowered injury-causing crashes by 78% compared to humans driving the same distance. That percentage translates to 98 fewer injury-causing crashes compared to what the average human driver would experience in the same driving conditions, over the same number of miles. We make this data available online at Waymo.com/safety, and I encourage the committee to review this performance data and our safety research.

In the cities where Waymo operates, we've prioritized building a robust, useful service for residents and visitors alike. We are connecting people to where they want to go in multiple

major metros, and helping them access other parts of the existing transportation network to get them to their destination, including connecting to public transit. Tens of thousands of people across the country are using Waymo to go to the grocery store, to dinner, to doctor appointments, and even to the airport. In Arizona, we have partnered with Phoenix Sky Harbor International Airport, where Waymo currently provides curbside pickup just like any other ride share service, 24 hours a day.

Waymo was excited to bring our technology to the D.C. area last year for testing purposes. The Waymo Driver spent nearly four months driving throughout parts of the district including Downtown, NoMa, Capitol Hill, and the Southwest Waterfront with a human specialist behind the wheel. We are eager to expand that work into Maryland and work towards giving residents across the region a new, safe, and reliable means of transportation.

I also want to tell you about how Waymo operates.

Before beginning our testing in a new city, Waymo works closely with state departments of transportation, highway patrol, and local leaders, as well as their city and regional counterparts. After a period of testing, we start with initial service territories for select riders. The first group is often Waymo employees, followed by a slow-and-steady introduction of members of the public. As we expand in any city, we thoughtfully scale our operations in coordination with our local partners.

Our mission is to be the world's most trusted driver and we take public safety very seriously. We have a team of former first responders and safety officials who work with emergency personnel of all kinds to train and inform them on the technology prior to and during ongoing operations. In fact, we have trained more than 15,000 first responders across the country. Waymo vehicles encounter hundreds of emergency vehicles on the roads where we operate every day, and can safely respond to their instructions.

Today, twenty-five states have enacted bills similar to SB 949, which is necessary before companies like Waymo can operate in any state. I hope that my testimony as well as testimony you will hear from others will shed light on the critical safety and accessibility benefits that AVs are providing today and can bring to our state. Nearly 43,000 traffic-related deaths happen on U.S. roads every year, and as of last week, 50 people have already died in traffic collisions in Maryland this year. We strongly believe Waymo's autonomous driving technology can make roads safer, and mobility more accessible.

On behalf of Waymo, I would like to thank Senator Love for her interest in this topic, and the innovative team at the Motor Vehicle Administration for their years of thoughtful leadership in this area.

I urge a favorable report on Senate Bill 949.

Thank you

SB949
Uploaded by: Jesse Shirek
Position: FAV

Ext. Comm. - Testimony - 2025 - Maryland SB 949 -
Uploaded by: Joshua Fisher
Position: FAV

March 5, 2025

The Honorable William C. Smith, Jr.
Chair, Senate Judicial Proceedings Committee
251 Taylor House Office Building
Annapolis, Maryland 21401

SB 949: Vehicle Laws - Fully Autonomous Vehicles
Position: Favorable

Chair Smith:

The Alliance for Automotive Innovation[1] (Auto Innovators) appreciates the opportunity to express our support for SB 949. SB 949 will establish a legal framework that supports the full deployment of AVs and will better equip Maryland's residents, businesses, transportation system, environment, and law enforcement to take advantage of the benefits presented by this technology.

AVs Can Improve Safety

The cars and trucks that consumers are buying today are the safest vehicles ever built. Even so, more than 40,990 people died in traffic crashes in the United States in 2023, including 621 in Maryland[2][3]. The 621 deaths in 2023 were an increase from 566 fatalities in 2022. The evidence shows that driver behavior – drivers who are impaired, unbelted, speeding, or driving recklessly – are significant factors in the increase in roadway fatalities. That is what vehicle safety is a priority and automated vehicle technology holds the promise to increase safety and reduce these numbers.

AV Deployment Is a Key Component of American Competitiveness

Autonomous driving has the attention of Washington, D.C., and the state's – and rightly so. Government has a role to play here, with governments at the state and federal level playing their traditional regulatory roles. Regulatory harmonization and coordination are key to creating a clear pathway for AV deployment and the significant safety, mobility and efficiency benefits that AVs promise. On top of the obvious safety benefits, AVs can provide accessible transportation options for seniors and individuals with disabilities and a chance to reduce traffic congestion and create new jobs and supply chains. All stakeholders should strive toward building trust within the AV ecosystem.

The sooner advanced automated driving systems can be brought to market and into the roadgoing fleet, the sooner the lifesaving promise of this technology may be realized. To fulfill this potential, our members – both automakers and technology suppliers – must have regulatory consistency and

[1] From the manufacturers producing most vehicles sold in the U.S. to autonomous vehicle innovators to equipment suppliers, battery producers and semiconductor makers – Alliance for Automotive Innovation represents the full auto industry, a sector supporting 10 million American jobs and five percent of the economy. Active in Washington, D.C. and all 50 states, the association is committed to a cleaner, safer and smarter personal transportation future. www.autosinnovate.org.
[2] https://zerodeathsmd.gov/resources/crashdata/crashdashboard/
[3] https://crashstats.nhtsa.dot.gov/Api/Public/Publication/813561

regulatory certainty. As you are aware, the design and planning of a new vehicle takes between 5-7 years, as the modern vehicle is comprised of over 30,000 parts, sourced from thousands of different suppliers, and each must be designed, integrated, produced, and assembled.

The longer it takes to get that regulatory structure, like SB 949, in place, the more skittish AV developers are going to get, especially when there is competition for capital for other pressing priorities related to electrification and battery manufacturing everywhere. Even if we don't get our act together in the U.S., the technology isn't going away. We'll cede our AV leadership to China and other nations already setting the right conditions to make AVs a reality.

Conclusion

AVs hold tremendous promise for a cleaner, safer, smarter future for mobility, but only if we work together on smart policies, like SB 949, that are modernized to address the tremendous opportunities that AV technologies hold when it comes to improving roadway safety and expanded mobility for millions of Americans. As our companies start to make plans and critical decisions about where and how and when to build and deploy these technologies, they need to know that policies are in place here in the U.S. that will support those plans and those decisions.

Thank you for your consideration of our position. For more information, please contact our local representative, Bill Kress, at (410) 375-8548.

Sincerely,

Josh Fisher
Senior Director
Alliance for Automotive Innovation.

[MD] SB 949_AVs_TechNet.pdf
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Position: FAV

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March 3, 2025

The Honorable William Smith, Jr.
Chair
House Judicial Proceedings Committee
Maryland Senate
2 East Miller Senate Office Building
11 Bladen Street, Annapolis, MD 21401

RE: SB 949 (Love) - Vehicle Laws - Fully Autonomous Vehicles – Favorable

Dear Chair Smith and Members of the Committee,

On behalf of TechNet, I'm writing to share our support of SB 949 on fully autonomous vehicles.

TechNet is the national, bipartisan network of technology CEOs and senior executives that promotes the growth of the innovation economy by advocating a targeted policy agenda at the federal and 50-state level. TechNet's diverse membership includes dynamic American businesses ranging from startups to the most iconic companies on the planet and represents over 4.5 million employees and countless customers in the fields of information technology, artificial intelligence, e-commerce, the sharing and gig economies, advanced energy, transportation, cybersecurity, venture capital, and finance. TechNet has offices in Austin, Boston, Chicago, Denver, Harrisburg, Olympia, Sacramento, Silicon Valley, Tallahassee, and Washington, D.C.

Autonomous vehicles (AVs) enable tremendous societal benefits by improving road safety, increasing access to transportation for all, enhancing efficiency of goods movement, creating jobs, helping to reduce congestion, and meeting consumer demand, while promoting innovation and growth across various sectors of the economy. Accordingly, TechNet supports policies that encourage the safe and efficient deployment of AVs on public roads in the United States. States should avoid adopting policies that will create, increase, or maintain barriers to the testing, development, and deployment of this technology and the benefits that come with it.

TechNet supports SB 949 as the bill aligns with the 25 other states that have passed authorizing AV language. We support and prioritize harmonization of laws between jurisdictions to avoid a patchwork of policies that may stifle or impede innovation. We believe that this bill promotes policies that lead to a clear pathway for driverless commercial operations. Additionally, this bill is a business-friendly model and technology-neutral. SB 949 will foster continued innovation in the

industry in Marland, avoid picking winners and losers, prioritize public safety, and protect intellectual property.

TechNet views AVs and related technology as job creators, with the AV industry playing a critical role in enhancing state and local economies, economic competitiveness, and opportunity overall. Thank you for your work on this important issue and please don't hesitate to reach out with any questions.

Sincerely,

Margaret Durkin

Margaret Durkin
TechNet Executive Director, Pennsylvania & the Mid-Atlantic

FINAL 2025 MD SB 949 Testimony - Robert Melvin.pdf
Uploaded by: Robert Melvin
Position: FAV

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www.rstreet.org

Testimony from:
Robert Melvin, Northeast Region Director, R Street Institute

Testimony in Support SB 949, "Vehicle Laws – Fully Autonomous Vehicles."

March 5, 2025

Senate Judicial Proceedings Committee

Chairman Smith and members of the committee,

My name is Robert Melvin, and I am the Northeast region director for the R Street Institute. The R Street Institute is a nonprofit, nonpartisan, public-policy research organization engaged in policy analysis and outreach to promote free markets and limited, effective government, including in the areas of technology and innovation policy. This is why we have an interest in Senate Bill 949.

SB 949 creates a regulatory framework for highly autonomous vehicles (AVs) in Maryland and authorizes their operation without a human driver provided that they comply with federal safety standards and state traffic laws. The bill also outlines legal responsibilities of autonomous vehicles, mandates the creation of law enforcement interaction plans, sanctions their use in transportation services, and precludes local jurisdictions from banning or regulating their operation. This critical measure will position Maryland as a leader in the cutting-edge autonomous vehicle industry while helping to address challenges facing its residents.

In Maryland, recent data has shown that fatal crashes have been increasing over the past several years, growing from 493 in 2019 to 573 such incidents in 2023.[1] There are a variety of factors that are causing this issue, but some of the primary offenders are human driving errors, such as drunk and aggressive driving, as well as distracted driving.[2] Traffic congestion is another issue plaguing drivers in the state, with surveys ranking Maryland 50th overall for gridlock.[3] Traffic jams are also costing its drivers significant time and money, with overall amounts ranging between $1,371 to $2,465 depending on where they reside in the state.[4] While there is no one-size-fits-all approach to addressing these challenges, SB 949 could help ameliorate these issues.

SB 949 would help bring regulatory clarity and consistency to autonomous vehicles in MD by establishing a foundation for AV operations. In doing so, it expands the choices available to consumers by permitting AVs on the roadways. Not only does it expand options for consumers, but it could save Maryland drivers money. Research has found that when AVs led human controlled vehicles that it resulted in a 42 percent decrease in fuel usage and eliminated stop-and-go traffic.[5] In addition, it would help make roadways even safer.

Research from Swiss Re, a major reinsurer, reviewed liability claims from collisions for 25.3 million fully autonomous miles driven by AV robo-taxis. It demonstrated that AVs are drastically safer than human drivers, with an 88 percent decline in claims related to property damage and a 92 percent decrease in bodily injury claims.[6] This suggests that AVs are 10.4 times safer than their human counterparts, with the safety rate of AVs doubling every five years.[7] Most often, it turns out that human drivers are the primary culprit in the limited instances of crashes involving AVs.[8]

Moreover, data indicates that AVs had 62 percent fewer police reported crashes, 78 percent fewer injury causing crashes, and 81 percent fewer airbag deployments when compared to an average human driver.[9] Considering that National Highway Traffic and Safety Administration data shows that accidents account for about $23 billion in U.S. medical expenses, a 90 percent decline in collision rates would decrease costs by about $20.7 billion annually.[10] While roadway safety and improve traffic flow are important reasons for authorizing AV deployment in Maryland, there are also economic benefits that one also must consider.

SB 949 will be economically productive for Maryland. One report estimates that the AV market could create as many as 455,000 new jobs over the next 15 years across the United States, with approximately 190 jobs generated for every 1000 AVs on the roads.[11] Considering that the state is ranked as the 3rd best state for AI jobs, and the 6th most innovative state, this proposal could help strengthen those positions and attract additional investment.[12]

While there may be some hesitation from individuals, it is important to point out that this isn't some experimental technology. In fact, it's been extensively deployed in many states, and Maryland already authorizes the testing of this technology on its roadways.[13] If this legislation is advanced, Maryland would join 25 other states that have sanctioned deployment of autonomous vehicles on its highways.[14]

In the end, SB 949 will help augment road safety, alleviate traffic congestion, and promote technological innovation and economic growth. For these reasons, we urge a favorable report of Senate Bill 949.

Thank you,

Robert Melvin
Northeast Region State Government Affairs Director
R Street Institute
rmelvin@rstreet.org

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[1] Maryland Department of Transportation, Motor Vehicle Administration, "Zero Deaths Maryland, Crash Summaries," Last accessed February 24, 2025. "https://zerodeathsmd.gov/resources/crashdata/.

[2] CDC, "Global Road Safety," May 16, 2024. https://www.cdc.gov/transportation-safety/global/index.html.

[3] Michelle Queen, "Study: Maryland Has Worst Traffic Congestion in U.S.," My Montgomery Community Media, January 17, 2023. https://www.mymcmedia.org/study-maryland-has-worst-traffic-congestion-in-u-s/#:~:text=Maryland%20ranked%2037th%20in%20the,fifth%20worst%20state%20for%20motorists.

[4] Alejandro Alvarez, "Highway congestion could be costing Maryland drivers thousands each year," WTOP News, May 2, 2023. https://wtop.com/local/2023/05/highway-congestion-could-be-costing-maryland-drivers-thousands-each-year/.

[5] Alexandre M. Bayen, "Eliminating Traffic Jams with Self-Driving Cars," University of California at Berkeley, March 15, 2021. https://ce.berkeley.edu/news/2537.

[6] Luigi Di Lillo, et al., "Do Autonomous Drivers Outperform Latest-Generation Human-Driven Vehicles? A comparison to Waymo's Auto Liability Insurance Claims at 25 million Miles," Waymo, 2024. https://waymo.com/research/do-autonomous-vehicles-outperform-latest-generation-human-driven-vehicles-25-million-miles/.

[7] Gale Pooley, "Waymo Drivers Are Way Safer (10x) Than Humans," *Human Progress*, Jan. 7, 2025. https://humanprogress.org/waymo-drivers-are-way-safer-10x-than-humans.

[8] Timothy B. Lee, "Human drivers are to blame for most serious Waymo collisions," *Understanding AI*, Sept. 10, 2024. https://www.understandingai.org/p/human-drivers-are-to-blame-for-most.

[9] Waymo, "Waymo Safety Impact: Waymo Driver Compared to Human Benchmarks," Last accessed February 24, 2025. https://waymo.com/safety/impact/.

[10] Kareem Othman, "Exploring the implications of autonomous vehicles: a comprehensive review," Innovative Infrastructure Solutions, March 1, 2022. https://pmc.ncbi.nlm.nih.gov/articles/PMC8885781/.

[11] Chamber of Progress, "Opportunity AV: How Many and What Types of Jobs Will Be Created by Autonomous Vehicles?," October 3, 2024. https://progresschamber.org/wp-content/uploads/2024/03/Opportunity-AV-How-Many-and-What-Type-of-Jobs-Will-Be-Created-by-Autonomous-Vehicles.pdf.

[12] Maryland Business Support, "Data Rankings, Innovation and Industry," Last accessed February 24, 2025. https://business.maryland.gov/ranking/?bj-ranking-topics%5B%5D=innovation-industry.

[13] Ariel Wolf, et al., "State Autonomous Vehicle Laws and Regulations," Venable LLP, December 2024, https://books.venable.com/Autonomous-Vehicles/4/.

[14] Ibid.

testimony2025sb949.pdf
Uploaded by: Franz Schneiderman
Position: UNF

Auto Consumer Alliance
13900 Laurel Lakes Avenue, Suite 100
Laurel, MD 20707

Testimony to the Senate Judicial Proceedings Committee
SB 949 – Vehicle Laws – Fully Autonomous Vehicles
Position: UNFAVORABLE

The Honorable Will Smith
Judicial Proceedings Committee
2 East, Miller Senate Building
Annapolis, MD 21401
cc: Members, Judicial Proceedings Committee

March 5, 2025

Dear Chairman Smith and Committee Members,

I'm a consumer advocate and Executive Director of Consumer Auto, a nonprofit group that works to secure safety, transparency, and fair treatment for Maryland drivers and consumers.

We oppose **SB 949** because we are concerned that it would put Marylanders at unnecessary risk by, for the first time, explicitly authorizing the widespread private use of autonomous cars and trucks on Maryland highways – at a time when the industry continues to face serious safety questions, public faith in AV technology is limited, federal regulators are yet to establish clear or rigorous safety standards for autonomous vehicles, and Maryland lacks a legal framework of its own to regulate such vehicles.

While AV advocates often claim their vehicles are safer than conventional cars, the data on that issue are murky at best. Data from California in 2022, for instance, showed that the crash rate for AVs was much higher than for more conventional vehicles – with 96.7 out of 1,000 (i.e. almost 10%) of AVs getting in a crash (vs. 7.0/1,000 for all cars) and 26.3 crashes per million miles driven among AVs (vs. 0.7 per million for all cars.)[1] Another study widely reported last year found that AVs appeared to have lower crash rates overall but "also found self-driving cars had a crash rate five times as great as human drivers when operating at dawn and dusk, along with almost double the accident rates of human drivers when making turns."[2] And many analysts have noted how AVs struggle to deal with unusual or sub-optimal road conditions or situations they may not be programmed to handle.[3]

Part of the reason for this is that, for all their high-tech sensors, as Dr. Missy Cummings, a leading AV expert and head of George Mason University's Autonomy and Robotics Center, notes: "the computer vision systems in these cars are extremely brittle. They will fail in ways we simply don't understand."[4] And at this point we have no federal safety standards for AV software or vision systems.

As a Brookings report from July 2024 argued, the data just don't support faith in the superior safety of AVs at this point: "However easy it is to assume that self-driving cars must be safer, it is a mistake… The best conclusion for now seems to be that the safety advantages of self-driving cars are aspirational but have not been proven."[5]

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[1] https://www.statista.com/chart/32985/collisions-crashes-per-motor-vehicle-vehicle-miles-traveled-by-type-of-vehicle/
[2] https://www.newscientist.com/article/2435896-driverless-cars-are-mostly-safer-than-humans-but-worse-at-turns/
[3] https://www.nytimes.com/2023/10/11/opinion/driverless-cars-san-francisco.html
[4] https://www.nytimes.com/2023/10/11/opinion/driverless-cars-san-francisco.html
[5] https://www.brookings.edu/articles/the-evolving-safety-and-policy-challenges-of-self-driving-cars/

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Laurel, MD 20707

Given such problems, and some deadly, well-publicized crashes caused by AV malfunctions, it's not surprising that public faith in AV technology is limited – and seems to be falling. In 2023 68% of Americans told AAA last year that they were outright afraid of self-driving vehicles (up from 55% in 2022) while just 9% said they trusted the technology. [6]

To be fair, **SB 949** does make an effort to establish some rules of the road for AVs and does stipulate that autonomous vehicles on state roads must be capable of operating "in accordance with Maryland vehicle law" and "in compliance with all applicable federal motor vehicle safety standards." But this offers little reassurance that they will be safe, as Maryland has not developed regulations specific to AV tech and, more troublingly, Congress and the lead federal auto safety agency (NHTSA) have yet to establish such standards.

Indeed, in May 2023, Jennifer Homendy, the chair of the National Transportation Safety Board lamented that, "The federal government isn't doing their job in that area… The NTSB has called on regulators to set performance minimums for these features [AVs], to test vehicles rigorously against those standards and provide the results to consumers. But we're still waiting." [7]

Two years later, we're still waiting. Worse still, a couple weeks ago the Elon Musk-led DOGE group apparently fired half the people working on a special task force NHTSA had established to examine AV safety and about 10% of the agency's workforce. This will almost surely leave NHTSA even less prepared to oversee AV tech effectively. As one of the fired engineers remarked, "If the question is, will this affect the federal government's ability to understand the safety case behind Tesla's vehicles, then yes, it will."[8]

To this point, Maryland has (wisely, I think) moved slowly on this unproven technology. While MDOT has articulated a "Vision for Connected and Automated Vehicles" and the state passed legislation in 2023 that authorizes limited conversions of vehicles into AVs, mostly for off-road commercial and industrial uses, the state has not acted to authorize widespread private use of AVs on public roads.

SB 949 would change that equation dramatically by allowing a person (or a transportation network or a for-hire vehicle firm) to operate "a fully autonomous vehicle on a highway in the state without a human driver" and, in fact, specifically precluding a state agency or local government that may have concerns about their safety from prohibiting their operation. While I know the bill sponsors are looking at amendments that may provide additional safeguards (and I'm happy to discuss those ideas), as written the bill's safety provisions are really rather modest: They require, basically, that the vehicles meet state and federal laws and that the AVs can achieve a "minimal risk condition" and submit a plan for interaction with law enforcement after a crash or failure.

I fear those stipulations leave serious safety concerns unresolved, especially given that (as noted above) no system of federal or state regulations to ensure AV safety yet exists. Safety advocates also note that

[6] https://info.oregon.aaa.com/aaa-fear-of-self-driving-cars-on-the-rise/
[7] https://www.cnn.com/2023/05/06/business/ntsb-automatic-driving-safety/index.html
[88] https://www.washingtonpost.com/business/2025/02/21/musk-doge-tesla-autonomous-vehicles-nhtsa/

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13900 Laurel Lakes Avenue, Suite 100
Laurel, MD 20707

what AV systems may deem a "minimal risk condition" after a system failure may not be a safe situation for other drivers at all.

As drafted, the bill also sets no limits on the size or number of AVs allowed on Maryland roads. It could therefore enable an unlimited number of large AV trucks, as well as smaller self-driving cars, to be on our roads – all while specifically prohibiting state agencies or local jurisdictions or from setting up even local prohibitions on them. The safety concerns this might raise in sensitive or risky areas like school zones or areas with a high density of pedestrian traffic are serious.

Until or unless we have clear data, reviewed carefully by experts outside the industry itself, that shows AV vehicles (including trucks) are safe and a regulatory framework in place to help ensure they will operate safely on public roads, moving to allow their widespread use (in unlimited numbers, in fact) -- as **SB 949** would do -- would, I fear, expose Maryland drivers to serious, ill-understood, and unnecessary risks.

We oppose SB 949 and ask you to give it an UNFAVORABLE report.

Sincerely,

Franz Schneiderman
Consumer Auto

Ext. Comm. - Testimony - 2025 - Maryland SB 949 -
Uploaded by: Joshua Fisher
Position: FAV

March 5, 2025

The Honorable William C. Smith, Jr.
Chair, Senate Judicial Proceedings Committee
251 Taylor House Office Building
Annapolis, Maryland 21401

SB 949: Vehicle Laws - Fully Autonomous Vehicles
Position: Favorable

Chair Smith:

The Alliance for Automotive Innovation[1] (Auto Innovators) appreciates the opportunity to express our support for SB 949. SB 949 will establish a legal framework that supports the full deployment of AVs and will better equip Maryland's residents, businesses, transportation system, environment, and law enforcement to take advantage of the benefits presented by this technology.

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AV Deployment Is a Key Component of American Competitiveness

Autonomous driving has the attention of Washington, D.C., and the state's – and rightly so. Government has a role to play here, with governments at the state and federal level playing their traditional regulatory roles. Regulatory harmonization and coordination are key to creating a clear pathway for AV deployment and the significant safety, mobility and efficiency benefits that AVs promise. On top of the obvious safety benefits, AVs can provide accessible transportation options for seniors and individuals with disabilities and a chance to reduce traffic congestion and create new jobs and supply chains. All stakeholders should strive toward building trust within the AV ecosystem.

The sooner advanced automated driving systems can be brought to market and into the roadgoing fleet, the sooner the lifesaving promise of this technology may be realized. To fulfill this potential, our members – both automakers and technology suppliers – must have regulatory consistency and

[1] From the manufacturers producing most vehicles sold in the U.S. to autonomous vehicle innovators to equipment suppliers, battery producers and semiconductor makers – Alliance for Automotive Innovation represents the full auto industry, a sector supporting 10 million American jobs and five percent of the economy. Active in Washington, D.C. and all 50 states, the association is committed to a cleaner, safer and smarter personal transportation future. www.autosinnovate.org.
[2] https://zerodeathsmd.gov/resources/crashdata/crashdashboard/
[3] https://crashstats.nhtsa.dot.gov/Api/Public/Publication/813561

regulatory certainty. As you are aware, the design and planning of a new vehicle takes between 5-7 years, as the modern vehicle is comprised of over 30,000 parts, sourced from thousands of different suppliers, and each must be designed, integrated, produced, and assembled.

The longer it takes to get that regulatory structure, like SB 949, in place, the more skittish AV developers are going to get, especially when there is competition for capital for other pressing priorities related to electrification and battery manufacturing everywhere. Even if we don't get our act together in the U.S., the technology isn't going away. We'll cede our AV leadership to China and other nations already setting the right conditions to make AVs a reality.

Conclusion

AVs hold tremendous promise for a cleaner, safer, smarter future for mobility, but only if we work together on smart policies, like SB 949, that are modernized to address the tremendous opportunities that AV technologies hold when it comes to improving roadway safety and expanded mobility for millions of Americans. As our companies start to make plans and critical decisions about where and how and when to build and deploy these technologies, they need to know that policies are in place here in the U.S. that will support those plans and those decisions.

Thank you for your consideration of our position. For more information, please contact our local representative, Bill Kress, at (410) 375-8548.

Sincerely,

Josh Fisher
Senior Director
Alliance for Automotive Innovation.

SB 949 Letter of Support.pdf
Uploaded by: Lea Rowe
Position: FAV

BLINDED VETERANS ASSOCIATION
SERVING BLINDED VETERANS SINCE WORLD WAR II

Testimony in Support of Senate Bill 949: Vehicle Laws - Fully Autonomous Vehicles

Chair Korman and members of the Environment and Transportation Committee, I am pleased to offer testimony in favor of Senate Bill 949: Vehicle Laws - Fully Autonomous Vehicles, on behalf of the Blinded Veterans Association (BVA).

Since 1945, BVA has been dedicated to empowering blinded veterans to live with dignity and independence, ensuring they take their rightful place in the community. As the only congressionally chartered Veterans Service Organization comprised of and led by visually impaired veterans, we understand firsthand the challenges of navigating life with significant vision loss. Veterans Health Administration data demonstrates the critical need for accessible services for veterans with vision loss. Research shows 130,000 veterans are legally blind, and projections indicate 1.1 million more live with low vision, defined as visual acuity of 20/70 or worse. For veterans experiencing severe vision impairment or blindness, including a significant portion of those returning from recent conflicts, accessible transportation is not merely a convenience but a critical necessity.

S.B. 949, by authorizing the use of fully autonomous vehicles on Maryland roads, directly addresses this critical need. Transportation independence is essential for individuals who are unable to drive, and for blinded veterans, this autonomy is paramount to maintaining their quality of life. BVA strongly advocates for the implementation of autonomous vehicle technology as a safe and sustainable transportation solution, particularly for veterans with vision impairment.

Autonomous vehicles have already proven to be a lifeline for blinded veterans in areas where services like Waymo are operational. This technology provides a level of safe, independent mobility that has been historically unattainable. For the first time, veterans can access transportation without relying on the availability of others. With self-driving vehicle companies providing over 150,000 rides weekly in approved markets, we urge this committee to recognize the transformative potential of this technology and extend these opportunities to the veterans and residents of Maryland.

BVA believes that S.B. 949 represents a significant step towards enhancing the independence and quality of life for blinded veterans and all Maryland residents. We respectfully request a favorable report on this bill.

Sincerely,

Lea Rowe

Lea Rowe
National Legislative Director
Blinded Veterans Association

[MD] SB 949_AVs_TechNet.pdf
Uploaded by: margaret durkin
Position: FAV

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March 3, 2025

The Honorable William Smith, Jr.
Chair
House Judicial Proceedings Committee
Maryland Senate
2 East Miller Senate Office Building
11 Bladen Street, Annapolis, MD 21401

RE: SB 949 (Love) - Vehicle Laws - Fully Autonomous Vehicles – Favorable

Dear Chair Smith and Members of the Committee,

On behalf of TechNet, I'm writing to share our support of SB 949 on fully autonomous vehicles.

TechNet is the national, bipartisan network of technology CEOs and senior executives that promotes the growth of the innovation economy by advocating a targeted policy agenda at the federal and 50-state level. TechNet's diverse membership includes dynamic American businesses ranging from startups to the most iconic companies on the planet and represents over 4.5 million employees and countless customers in the fields of information technology, artificial intelligence, e-commerce, the sharing and gig economies, advanced energy, transportation, cybersecurity, venture capital, and finance. TechNet has offices in Austin, Boston, Chicago, Denver, Harrisburg, Olympia, Sacramento, Silicon Valley, Tallahassee, and Washington, D.C.

Autonomous vehicles (AVs) enable tremendous societal benefits by improving road safety, increasing access to transportation for all, enhancing efficiency of goods movement, creating jobs, helping to reduce congestion, and meeting consumer demand, while promoting innovation and growth across various sectors of the economy. Accordingly, TechNet supports policies that encourage the safe and efficient deployment of AVs on public roads in the United States. States should avoid adopting policies that will create, increase, or maintain barriers to the testing, development, and deployment of this technology and the benefits that come with it.

TechNet supports SB 949 as the bill aligns with the 25 other states that have passed authorizing AV language. We support and prioritize harmonization of laws between jurisdictions to avoid a patchwork of policies that may stifle or impede innovation. We believe that this bill promotes policies that lead to a clear pathway for driverless commercial operations. Additionally, this bill is a business-friendly model and technology-neutral. SB 949 will foster continued innovation in the

industry in Marland, avoid picking winners and losers, prioritize public safety, and protect intellectual property.

TechNet views AVs and related technology as job creators, with the AV industry playing a critical role in enhancing state and local economies, economic competitiveness, and opportunity overall. Thank you for your work on this important issue and please don't hesitate to reach out with any questions.

Sincerely,

Margaret Durkin

Margaret Durkin
TechNet Executive Director, Pennsylvania & the Mid-Atlantic

SB949 Amendment

Uploaded by: Natalie Ziegler

Position: FAV

HB1256/863527/1

AMENDMENTS PREPARED BY THE DEPT. OF LEGISLATIVE SERVICES

27 FEB 25
16:05:45

BY: Delegate Ziegler
(To be offered in the Environment and Transportation Committee)

AMENDMENTS TO HOUSE BILL 1256
(First Reading File Bill)

AMENDMENT NO. 1

On page 1, after line 5, insert:

"BY repealing and reenacting, without amendments,
Article – Transportation
Section 15–901(a)
Annotated Code of Maryland
(2020 Replacement Volume and 2024 Supplement)

BY repealing and reenacting, with amendments,
Article – Transportation
Section 15–901(f)
Annotated Code of Maryland
(2020 Replacement Volume and 2024 Supplement)";

and in line 8, strike "21–1505" and substitute "21–1507".

AMENDMENT NO. 2

On page 1, after line 14, insert:

"15–901.

(a) In this subtitle the following words have the meanings indicated.

(f) "Operational design domain" means operating conditions under which a given automated driving system is specifically designed to function, including conditions subject to:

(1) Environmental restrictions;

(2) Geographic restrictions;

(3) Time–of–day restrictions; or

(4) The **[**required**]** **REQUISITE** presence or absence of certain traffic or roadway characteristics.".

On page 3, in lines 7 and 8, strike "**AN EXEMPTION HAS BEEN GRANTED BY THE ADMINISTRATION**" and substitute "**THE ADMINISTRATION HAS ADOPTED A REGULATION EXEMPTING AUTONOMOUS VEHICLES**"; and in line 18, strike "**LAW ENFORCEMENT**" and substitute "**FIRST RESPONDER**".

On pages 3 and 4, strike beginning with "**BEFORE**" in line 31 on page 3 down through "**PROVIDES.**" in line 2 on page 4 and substitute "**THE OWNER OF A FULLY AUTONOMOUS VEHICLE SHALL SUBMIT EVIDENCE TO THE ADMINISTRATION, IN THE MANNER REQUIRED BY THE ADMINISTRATION, CERTIFYING THAT ALL SECURITY MEASURES REQUIRED UNDER TITLE 17, SUBTITLE 1 OF THIS ARTICLE ARE IN EFFECT BEFORE OPERATING THE FULLY AUTONOMOUS VEHICLE WITHOUT A HUMAN DRIVER AND WITH THE AUTOMATED DRIVING SYSTEM ENGAGED ON A HIGHWAY IN THE STATE.**".

On page 4, in line 11, strike "**(1)**"; in the same line, after "**DRIVER**" insert "**WHO POSSESSES A VALID DRIVER'S LICENSE**"; and strike in their entirety lines 13 through 17, inclusive.

On page 5, after line 2, insert:

"**(C) SUBSECTION (B) OF THIS SECTION MAY NOT BE INTERPRETED TO EXEMPT THE OWNER OF AN AUTONOMOUS VEHICLE WHO IS ENGAGING THE**

AUTONOMOUS DRIVING SYSTEM FOR USE BY A TRANSPORTATION NETWORK COMPANY, A FOR–HIRE VEHICLE COMPANY, OR ANOTHER GROUND PASSENGER TRANSPORTATION COMPANY FROM ANY REQUIREMENT OF § 21–1502 OF THIS ARTICLE.";

and after line 9, insert:

"**21-1506.**

AN AUTONOMOUS VEHICLE SHALL COMPLY WITH THE REQUIREMENTS OF SUBTITLE 46 OF THE COMMERCIAL LAW ARTICLE.

21–1507.

(A) IF THE ADMINISTRATION HAS INFORMATION, DATA, OR OTHER EVIDENCE INDICATING THAT AN AUTONOMOUS VEHICLE IS NOT IN SAFE MECHANICAL CONDITION AND MAY ENDANGER PERSONS ON THE HIGHWAY, THE DEPARTMENT MAY ISSUE A REQUEST FOR RELEVANT INFORMATION TO THE OWNER AND THE PERSON WHO SUBMITTED THE AUTONOMOUS VEHICLE PLAN REQUIRED BY § 21–1502(B) OF THIS SUBTITLE.

(B) (1) THE OWNER OR PERSON WHO SUBMITTED THE AUTONOMOUS VEHICLE PLAN REQUIRED BY § 21–1502(B) OF THIS SUBTITLE SHALL RESPOND TO A REQUEST FOR INFORMATION SUBMITTED UNDER SUBSECTION (A) OF THIS SECTION WITHIN A REASONABLE TIME SPECIFIED BY THE ADMINISTRATION.

(2) THE RESPONSE REQUIRED UNDER PARAGRAPH (1) OF THIS SUBSECTION MAY BE IN THE FORM OF DOCUMENTS, A MEETING WITH THE DEPERTMENT, A DEMONSTRATION, OR ANY OTHER REASONABLE FORM OR COMBINATION OF FORMS.

(C) (1) AFTER CONSIDERING AND EVALUATING ALL RESPONSES PROVIDED UNDER SUBSECTIONS (A) AND (B) OF THIS SECTION, IF THE ADMINISTRATION DETERMINES BASED ON DATA, INFORMATION, OR OTHER EVIDENCE THAT AN AUTONOMOUS VEHICLE IS NOT IN SAFE MECHANICAL CONDITION AND ENDANGERS PERSONS ON THE HIGHWAY, THE ADMINISTRATION MAY SEND A NOTICE OF INTENT TO SUSPEND THE REGISTRATION OR IMPOSE RESTRICTIONS ON THE OPERATION OF THE AUTONOMOUS VEHICLE TO THE VEHICLE OWNER AND THE PERSON WHO SUBMITTED THE AUTONOMOUS VEHICLE PLAN REQUIRED BY § 21–1502(B) OF THIS SUBTITLE.

(2) THE NOTICE REQUIRED UNDER PARAGRAPH (1) OF THIS SUBSECTION SHALL INCLUDE:

(I) A DESCRIPTION OF THE DEPARTMENT'S REASONS AND EVIDENCE SUPPORTING THE DETERMINATION; AND

(II) A STATEMENT REQUIRING THAT A CERTIFICATION OF CORRECTION OR ADJUSTMENT BE SUBMITTED WITHIN A SPECIFIED TIME AND THAT THE CERTIFICATION INCLUDE AN EXPLANATION OF HOW THE ISSUES IDENTIFIED BY THE DEPARTMENT IN THE NOTICE HAVE BEEN ADDRESSED, SUCH AS BY IDENTIFYING ADJUSTMENTS MADE TO THE AUTOMATED DRIVING SYSTEM OR OPERATIONAL MEASURES IMPLEMENTED.

(D) (1) IF THE OWNER OR PERSON WHO SUBMITTED THE STATEMENT FOR THE AUTONOMOUS VEHICLE THAT IS THE SUBJECT OF A NOTICE OF INTENT TO SUSPEND OR RESTRICT OPERATION FAILS TO SUBMIT THE CERTIFICATION REQUIRED BY § 21–1502(C) OF THIS SUBTITLE WITHIN THE TIME SPECIFIED, OR THE ADMINISTRATION FINDS THAT THE CERTIFICATION IS INSUFFICIENT, THE ADMINISTRATION SHALL NOTIFY THE PERSON AND OWNER THAT THE

REGISTRATION FOR THAT AUTONOMOUS VEHICLE HAS BEEN SUSPENDED OR RESTRICTED.

(2) IF THE PERSON OR OWNER LATER SUBMITS THE REQUIRED CERTIFICATION, THE ADMINISTRATION SHALL REMOVE THE SUSPENSION OR RESTRICTION ON RECEIPT OF THE CERTIFICATION.

(E) (1) A PERSON MAY REQUEST A HEARING TO DISPUTE THE ADMINISTRATION'S FINDING TO SUSPEND OR RESTRICT OPERATION WITHIN 10 DAYS AFTER THE DATE OF ISSUANCE OF THE NOTICE OF INTENT REQUIRED BY SUBSECTION (D) OF THIS SECTION.

(2) A HEARING REQUESTED UNDER THIS SUBSECTION SHALL BE HELD NOT MORE THAN 60 DAYS AFTER THE SUBMISSION OF A REQUEST FOR A HEARING.

(3) A DECISION TO UPHOLD THE DETERMINATION OF THE DEPARTMENT IS SUBJECT TO JUDICIAL REVIEW BY APPEAL TO THE CIRCUIT COURT OF MARYLAND.".

SB949.pdf
Uploaded by: Richard Tabuteau
Position: FAV

VOLVO

TO: The Honorable William C. Smith, Chair
Members, Senate Judicial Proceedings Committee
Senator Sara Love

FROM: Richard A. Tabuteau

DATE: March 5, 2025

RE: **FAVORABLE:** Senate Bill 949 – *Vehicle Laws - Fully Autonomous Vehicles*

In Maryland, Volvo Group North America's Hagerstown Powertrain Production facility employs nearly 2,000 people including over 1,400 members of the UAW Locals 171 and 1247 and is the last major automotive manufacturer in the state. The plant develops, manufactures, and tests heavy-duty powertrains, transmissions and axles for its Mack and Volvo trucks as well as Prevost and Volvo buses at its 280-acre campus. Volvo Group also employs more than 60 people at one of its U.S. parts distribution facilities in Elkridge.

Volvo is leading in the commercial autonomous vehicle space by developing the Volvo VNL Autonomous. The Volvo VNL Autonomous is a truck built for autonomy on Volvo's autonomous technology platform and features six critical redundant systems—dual braking, steering, communication, computing, power, energy storage, and motion control—enabling safe operations. This autonomous transport solution includes a virtual driver, required infrastructure, operations and uptime support as well as a cloud solution that controls the transport system and manages logistics flows. Volvo Autonomous Solutions ("V.A.S.") is currently testing autonomous vehicles in Texas on a lane from Dallas to Houston.

A decade ago, in 2015, the Maryland Motor Vehicle Administration (MVA) established the Connected and Automated Vehicles Workgroup to promote autonomous vehicle innovation by developing a strategic framework that prioritizes safety. Current testing in Maryland takes place at designated sites owned by the Maryland Department of Transportation and its partners. Senate Bill 949 authorizes a person to operate a fully autonomous vehicle on Maryland highways. Before operating a fully autonomous vehicle, a person must submit a law enforcement interaction plan to the administration and proof of security to the MVA. This legislation offers a legal path to operating autonomously in Maryland, provides the State with visibility into companies seeking to operate autonomously in the State, and an opportunity to engage the industry to establish the right guardrails to foster innovation without compromising safety.

Though the vehicles may be autonomous, humans will continue to fill key operational roles in the autonomous vehicle ecosystem. Humans will inspect autonomous vehicles for maintenance, safety, and compliance with the Federal Motor Carrier Safety Administration, Federal Motor

Vehicle Safety Standards, Commercial Vehicle Safety Alliance Enhanced Pre-Trip Inspection criteria, and the Maryland Motor Vehicle Administration requirements. Developers and operators would also work with law enforcement to familiarize them with autonomous vehicle operation, including Minimal Risk Maneuvers (MRM). In addition, humans will support autonomous vehicles as remote assistants monitoring system functions and providing logistical support (*e.g.* planners, launchers, monitors, etc.) similar to motor carrier dispatchers and will also play key roles at autonomous vehicle terminals for middle-mile transportation. Crucially for stabilizing the overall trucking workforce, dispatchers are not required to obtain and maintain a commercial driver's license.

With the passage of Senate Bill 949, Volvo and other companies with a presence in Maryland will be well positioned to win the future of autonomous vehicle technology. Volvo urges the Senate Judicial Proceedings Committee to give Senate Bill 949 a favorable report.

For more information call:
Richard A. Tabuteau
347.886.2904

FINAL 2025 MD SB 949 Testimony - Robert Melvin.pdf
Uploaded by: Robert Melvin
Position: FAV

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Washington, D.C. 20005
202-525-5717

Free Markets. Real Solutions.
www.rstreet.org

Testimony from:
Robert Melvin, Northeast Region Director, R Street Institute

Testimony in Support SB 949, "Vehicle Laws – Fully Autonomous Vehicles."

March 5, 2025

Senate Judicial Proceedings Committee

Chairman Smith and members of the committee,

My name is Robert Melvin, and I am the Northeast region director for the R Street Institute. The R Street Institute is a nonprofit, nonpartisan, public-policy research organization engaged in policy analysis and outreach to promote free markets and limited, effective government, including in the areas of technology and innovation policy. This is why we have an interest in Senate Bill 949.

SB 949 creates a regulatory framework for highly autonomous vehicles (AVs) in Maryland and authorizes their operation without a human driver provided that they comply with federal safety standards and state traffic laws. The bill also outlines legal responsibilities of autonomous vehicles, mandates the creation of law enforcement interaction plans, sanctions their use in transportation services, and precludes local jurisdictions from banning or regulating their operation. This critical measure will position Maryland as a leader in the cutting-edge autonomous vehicle industry while helping to address challenges facing its residents.

In Maryland, recent data has shown that fatal crashes have been increasing over the past several years, growing from 493 in 2019 to 573 such incidents in 2023.[1] There are a variety of factors that are causing this issue, but some of the primary offenders are human driving errors, such as drunk and aggressive driving, as well as distracted driving.[2] Traffic congestion is another issue plaguing drivers in the state, with surveys ranking Maryland 50th overall for gridlock.[3] Traffic jams are also costing its drivers significant time and money, with overall amounts ranging between $1,371 to $2,465 depending on where they reside in the state.[4] While there is no one-size-fits-all approach to addressing these challenges, SB 949 could help ameliorate these issues.

SB 949 would help bring regulatory clarity and consistency to autonomous vehicles in MD by establishing a foundation for AV operations. In doing so, it expands the choices available to consumers by permitting AVs on the roadways. Not only does it expand options for consumers, but it could save Maryland drivers money. Research has found that when AVs led human controlled vehicles that it resulted in a 42 percent decrease in fuel usage and eliminated stop-and-go traffic.[5] In addition, it would help make roadways even safer.

Research from Swiss Re, a major reinsurer, reviewed liability claims from collisions for 25.3 million fully autonomous miles driven by AV robo-taxis. It demonstrated that AVs are drastically safer than human drivers, with an 88 percent decline in claims related to property damage and a 92 percent decrease in bodily injury claims.[6] This suggests that AVs are 10.4 times safer than their human counterparts, with the safety rate of AVs doubling every five years.[7] Most often, it turns out that human drivers are the primary culprit in the limited instances of crashes involving AVs.[8]

Moreover, data indicates that AVs had 62 percent fewer police reported crashes, 78 percent fewer injury causing crashes, and 81 percent fewer airbag deployments when compared to an average human driver.[9] Considering that National Highway Traffic and Safety Administration data shows that accidents account for about $23 billion in U.S. medical expenses, a 90 percent decline in collision rates would decrease costs by about $20.7 billion annually.[10] While roadway safety and improve traffic flow are important reasons for authorizing AV deployment in Maryland, there are also economic benefits that one also must consider.

SB 949 will be economically productive for Maryland. One report estimates that the AV market could create as many as 455,000 new jobs over the next 15 years across the United States, with approximately 190 jobs generated for every 1000 AVs on the roads.[11] Considering that the state is ranked as the 3rd best state for AI jobs, and the 6th most innovative state, this proposal could help strengthen those positions and attract additional investment.[12]

While there may be some hesitation from individuals, it is important to point out that this isn't some experimental technology. In fact, it's been extensively deployed in many states, and Maryland already authorizes the testing of this technology on its roadways.[13] If this legislation is advanced, Maryland would join 25 other states that have sanctioned deployment of autonomous vehicles on its highways.[14]

In the end, SB 949 will help augment road safety, alleviate traffic congestion, and promote technological innovation and economic growth. For these reasons, we urge a favorable report of Senate Bill 949.

Thank you,

Robert Melvin
Northeast Region State Government Affairs Director
R Street Institute
rmelvin@rstreet.org

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[1] Maryland Department of Transportation, Motor Vehicle Administration, "Zero Deaths Maryland, Crash Summaries," Last accessed February 24, 2025. "https://zerodeathsmd.gov/resources/crashdata/.

[2] CDC, "Global Road Safety," May 16, 2024. https://www.cdc.gov/transportation-safety/global/index.html.

[3] Michelle Queen, "Study: Maryland Has Worst Traffic Congestion in U.S.," My Montgomery Community Media, January 17, 2023. https://www.mymcmedia.org/study-maryland-has-worst-traffic-congestion-in-u-s/#:~:text=Maryland%20ranked%2037th%20in%20the,fifth%20worst%20state%20for%20motorists.

[4] Alejandro Alvarez, "Highway congestion could be costing Maryland drivers thousands each year," WTOP News, May 2, 2023. https://wtop.com/local/2023/05/highway-congestion-could-be-costing-maryland-drivers-thousands-each-year/.

[5] Alexandre M. Bayen, "Eliminating Traffic Jams with Self-Driving Cars," University of California at Berkeley, March 15, 2021. https://ce.berkeley.edu/news/2537.

[6] Luigi Di Lillo, et al., "Do Autonomous Drivers Outperform Latest-Generation Human-Driven Vehicles? A comparison to Waymo's Auto Liability Insurance Claims at 25 million Miles," Waymo, 2024. https://waymo.com/research/do-autonomous-vehicles-outperform-latest-generation-human-driven-vehicles-25-million-miles/.

[7] Gale Pooley, "Waymo Drivers Are Way Safer (10x) Than Humans," *Human Progress*, Jan. 7, 2025. https://humanprogress.org/waymo-drivers-are-way-safer-10x-than-humans.

[8] Timothy B. Lee, "Human drivers are to blame for most serious Waymo collisions," *Understanding AI*, Sept. 10, 2024. https://www.understandingai.org/p/human-drivers-are-to-blame-for-most.

[9] Waymo, "Waymo Safety Impact: Waymo Driver Compared to Human Benchmarks," Last accessed February 24, 2025. https://waymo.com/safety/impact/.

[10] Kareem Othman, "Exploring the implications of autonomous vehicles: a comprehensive review," Innovative Infrastructure Solutions, March 1, 2022. https://pmc.ncbi.nlm.nih.gov/articles/PMC8885781/.

[11] Chamber of Progress, "Opportunity AV: How Many and What Types of Jobs Will Be Created by Autonomous Vehicles?," October 3, 2024. https://progresschamber.org/wp-content/uploads/2024/03/Opportunity-AV-How-Many-and-What-Type-of-Jobs-Will-Be-Created-by-Autonomous-Vehicles.pdf.

[12] Maryland Business Support, "Data Rankings, Innovation and Industry," Last accessed February 24, 2025. https://business.maryland.gov/ranking/?bj-ranking-topics%5B%5D=innovation-industry.

[13] Ariel Wolf, et al., "State Autonomous Vehicle Laws and Regulations," Venable LLP, December 2024, https://books.venable.com/Autonomous-Vehicles/4/.

[14] Ibid.

Favorable SB949 AV Standards.pdf
Uploaded by: Ronza Othman
Position: FAV

NATIONAL FEDERATION OF THE BLIND
MARYLAND

Live the life you want.

From: Ronza Othman, President
National Federation of the Blind of Maryland
15 Charles Plaza, #3002
Baltimore, MD 21201 president@nfbmd.org

To: Senate Judicial Proceedings Committee

The members of the National Federation of the Blind of Maryland urge the Senate Judicial Proceedings Committee to give a favorable report to SB0949. This bill establishes standards for the use of fully autonomous vehicles in Maryland. This bill also ensures that individuals with disabilities are able to use such AVs free from discrimination.

Blind and low-vision Marylanders depend on transportation options including rideshare to move about our communities, attend medical appointments, go to and from work, and so on; we do not drive ourselves, and thus we depend on other means besides our own vehicles. Rideshare is one major method we use to travel. However, we have experienced significant discrimination when using rideshare services where there is a human operator. Our members report regular, sometimes daily, rideshare denials from individual drivers of companies like Uber and Lyft. Though these denials tend to be regular and frequent for guide dog users, they are alarmingly common for those who use a long white cane as well. Inherent in a system that depends on people is a system that is capable of discrimination. AV technology eliminates this discrimination, because an AV doesn't know or care if I have a guide dog or a long white cane, and it won't bring its preconceived notions or incorrect stereotypes when deciding whether or not to leave me standing at the curb, causing me to miss my doctor's appointment or be late to work.

The NFB has been working with the autonomous vehicle industry to ensure that AV technology is nonvisually accessible. Washington, DC, and other nearby jurisdictions have laws and regulations in place that enable their residents to use AV technology, or they are in testing phases meaning this technology will be coming to an end user soon. At present, an individual has to switch vehicles at the state line, but with Maryland, the District, and others being part of a single transportation system and community, this is frankly silly and disruptive. We believe Maryland should have the same access for AV users as nearby jurisdictions.

Some may raise concerns about this technology with regard to safety. The reality is that AV technology is safer than human-operated vehicles, because an autonomous vehicle will not drive drunk, or text while driving, or fall asleep while driving.

A recent media story about an AV that got lost in an airport parking lot discounts that human operators routinely get lost in parking lots, drive the wrong-way on a one-way street, and so on. The benefit of an AV is that the monitors can get it straightened out fairly quickly, whereas human operators will continue to be lost, etc.

For those reasons and others, we ask for a favorable report on SB0949. For questions, please contact me at President@nfbmd.org or at 443-426-4110.

National Federation of the Blind of Maryland
Ronza Othman, *President NFBMD* | 15 Charles Plaza, #3002, Baltimore, MD 21201 **|** 443-426-4110**|** www.nfbmd.org

Chamber of Progress_MD SB 949 (Love) - Support.pdf
Uploaded by: Ruth Whittaker
Position: FAV

CHAMBER OF PROGRESS

March 5, 2025

The Honorable William Smith
Chair, Senate Committee on Judicial Proceedings
Room 2 East Wing, Miller Senate Office Building
11 Bladen St.
Annapolis, MD 21401

Re: Support SB 949 and a comprehensive AV Deployment Framework for Maryland

Dear Chair Smith and members of the committee:

On behalf of Chamber of Progress – a tech industry association supporting public policies to build a more inclusive society in which all people benefit from technological advancements – I write in **support of SB 949.**

Chamber of Progress is a strong supporter of autonomous vehicles because of their enormous social, economic, and environmental benefits. Autonomous vehicles have the potential to save thousands of lives and expand mobility for thousands of people across Maryland. They also have the potential to create hundreds of thousands of high-paying jobs and connect people to millions of other jobs. Finally, autonomous vehicles will reduce roadway emissions and help Maryland reach its goals of net-zero emissions by 2045.[1]

By creating a pathway for the deployment of autonomous vehicles, this bill will unlock these benefits for Maryland residents.

Autonomous vehicles will bring safer streets and reduce the number of accidents

[1] *Priority Climate Action Plan State of Maryland*. Maryland Department of the Environment. (Mar. 2024). https://www.epa.gov/system/files/documents/2024-03/mde-state-of-maryland-cprg-priority-climate-action-plan.pdf

The National Highway Traffic Safety Association (NHTSA) released crash data reporting for the first half of 2023, with over 19,000 lives lost.[2] So far this year, 61 people have died in Maryland alone.[3]

Research shows that at least 90% of car crashes are caused by human error.[4] By removing human error from the roads, autonomous vehicles can help eliminate the leading causes of crashes and fatalities. A series of studies from 2023 found that autonomous ridesharing services in Los Angeles, San Francisco, and Phoenix experienced 57% fewer police-reported crashes and 85% fewer crashes involving injuries compared to human drivers.[5] Our organization applied that research to traffic data in New York[6] and California[7] and found that 1,800 traffic-related deaths could have been avoided in the last 5 years if autonomous vehicles had been widely deployed.

Autonomous vehicles will also increase transportation options for Marylanders who are currently underserved or face mobility challenges

In neighborhoods where public transit options are scarce, autonomous vehicles can increase transportation options and connect residents to mobility hubs.[8] For example, in Maryland, areas such as Baltimore City experience a significant transit gap.[9] For people living with disabilities who cannot drive or are underserved by public transit, AVs can increase mobility.

---

[2] National Highway Traffic Safety Administration. *NHTSA Estimates Traffic Fatalities Continued to Decline in the First Half of 2023*, US Department of Transportation (Sept. 2023). https://www.nhtsa.gov/press-releases/2023-Q2-traffic-fatality-estimates#:~:text=The%20National%20Highway%20Traffic%20Safety,to%20make%20their%20streets%20safer.%E2%80%9D

[3] Zero Deaths Maryland Highway Safety Office *Maryland Crash Data* (Mar. 2025). https://zerodeathsmd.gov/resources/crashdata/

[4] National Highway Traffic Safety Administration. *Traffic Safety Facts: Critical Reasons for Crashes Investigated in the National Motor Vehicle Crash Causation Survey*, US Department of Transportation (Feb. 2015). https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812115

[5] Gupta, Raghav, et. al. *Benchmarks for Retrospective Automated Driving System Crash Rate Analysis Using Police-Reported Crash Data*, Cornell University (July 2024). https://arxiv.org/abs/2312.12675 ; https://arxiv.org/abs/2312.13228

[6] Harger, Kaitlyn. *AVs Could Have Saved Over 500 Lives and Stopped 83,000 Injuries in New York Over The Last Five Years*, Medium. Chamber of Progress (May 2024). https://medium.com/chamber-of-progress/avs-could-have-saved-over-500-lives-and-stopped-83-000-injuries-in-new-york-over-the-last-five-cf843e86ff49

[7] Harger, Kaitlyn. *Analysis: AVs in California Could Have Saved Up to 1,300 Lives, Prevented Up to 5,000 Major Injuries Over Past Three Years*, Chamber of Progress (Mar. 2024). (https://progresschamber.org/wp-content/uploads/2024/03/AV-Safety-Research-California-Traffic-Fatality-Analysis-03-24.pdf

[8] Andrews, Jonathan. *How AVs are transforming public transportation*, Cities Today. PFD Publications Ltd. (2023.) https://media.maymobility.com/May-Mobility-Cities-Today-AVs-Transforming-Public-Transportation-Case-Study.pdf

[9] *Transit Deserts: Baltimore City*, Maryland. Transportation Research Board. (Mar. 2021). https://trid.trb.org/View/1573232

Further, only 24% of Americans with disabilities participated in the labor force in 2021.[10] Mobility challenges and inaccessible transit options present significant obstacles for people with disabilities trying to reach jobs and education.[11] Public transit and paratransit options do not fully meet these communities' needs, with unreliable service times and longer commutes to access pharmacies, hospitals, and schools.[12] According to the Urban Institute, AVs can improve paratransit services, making them more affordable and flexible for riders because they can provide customizable, curb-to-curb service.[13] A study by the National Disability Institute found that widespread adoption of AVs could connect people with disabilities with over 4 million jobs.[14]

Autonomous vehicles will also create jobs and fill labor gaps.

Autonomous vehicles can also promote job growth. Our research found that nationwide, replacing 13% of vehicles on the road with AVs over the next 15 years could create 455,000 jobs. Those jobs would be high-paying and accessible without a college degree, with 59% of workers without a degree earning more than the U.S. median wage.[15]

Autonomous vehicles can also supplement labor when gaps exist. Across the country, the trucking industry has experienced extreme turnover and widespread job vacancies, resulting in significant delays to product shipments and rising prices for basic necessities. The crisis facing the trucking industry hasn't just resulted in delayed shipments, but also in higher prices for consumers. Autonomous, driverless trucks can mitigate these costs by filling driver vacancies, and eliminating the need for excessive recruitment, retention, and other overhead costs ultimately bringing down the price of shipping and consumer goods.

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[10] TED: The Economics Daily. *Labor force participation rate 24.2 percent for people with disability in 2023*, US Bureau of Labor Statistics (Oct. 2024). https://www.bls.gov/opub/ted/2024/labor-force-participation-rate-24-2-percent-for-people-with-a-disability-in-2023.htm

[11] Modicamore, Dominic, et. al. *Economic Impacts of Removing Transportation Barriers to Employment for Individuals with Disabilities Through Autonomous Vehicle Adoption*, National Disability Institute and ICF (Dec. 2022). https://www.nationaldisabilityinstitute.org/wp-content/uploads/2023/02/ndi-economicimpactsofremovingtransportationbarriers.pdf

[12] Fact Sheet, *The State of Transit Equity: SF Bay Area*, TransitCenter. https://transitcenter.org/wp-content/uploads/2021/06/BayAreaFactSheet.pdf

[13] Fiol, Olivia; Weng, Sophia. *Shared Autonomous Vehicles Could Improve Transit Access for People with Disabilities If Regulated Appropriately*, Urban Wire (Oct. 2022). https://www.urban.org/urban-wire/shared-autonomous-vehicles-could-improve-transit-access-people-disabilities-if-regulated#:~:text=Because%20AVs%20don't%20need,and%20can't%20currently%20drive.

[14] Modicamore, Dominic, et. al. *Economic Impacts of Removing Transportation Barriers to Employment for Individuals with Disabilities Through Autonomous Vehicle Adoption*, National Disability Institute and ICF (Dec. 2022). https://www.nationaldisabilityinstitute.org/wp-content/uploads/2023/02/ndi-economicimpactsofremovingtransportationbarriers.pdf

[15] Report. *Opportunity AV: How Many and What Types of Jobs Will Be Created by Autonomous Vehicles?*, Chamber of Progress (Feb. 2024). https://progresschamber.org/wp-content/uploads/2024/03/Opportunity-AV-How-Many-and-What-Type-of-Jobs-Will-Be-Created-by-Autonomous-Vehicles.pdf

Autonomous vehicles support Maryland's sustainability efforts

Autonomous vehicles also promote sustainable transportation systems. According to the Southwest Research Institute, autonomous vehicles can be up to 20% more fuel efficient than human-driven vehicles.[16] Since autonomous vehicles are programmed to follow traffic rules and speed limits, autonomous vehicles will ultimately use less energy. Most AVs are also predicted to be electric, making them a cleaner transportation option than vehicles using internal combustion engines.[17] Deploying autonomous vehicles can help Maryland reach its goal of 60% reduction in emissions by 2031.[18]

Autonomous vehicles present tremendous opportunities to make Maryland's roads safer and cleaner while expanding transportation options and economic opportunities.

For these reasons, **we urge you to support SB 949.**

Sincerely,

Brianna January
Director of State & Local Government Relations, Northeast US

[16] Press Release. SwRI Achieves 20% Improvement In Vehicle Fuel Efficiency With Connectivity, Automation, SouthWest Research Institute (Oct. 2020).
https://www.swri.org/press-release/vehicle-fuel-efficiency-improvement-connectivity-automation-arpa-e-nextcar
[17] Nunno, Richard. Issue Brief. *Autonomous Vehicles: State of the Technology and Potential Role as a Climate Solution*, Environmental and Energy Study Institute (Jun. 2021).
https://www.eesi.org/papers/view/issue-brief-autonomous-vehicles-state-of-the-technology-and-potential-role-as-a-climate-solution#:~:text=A%20recent%20study%20suggests%20that,keeping%20climate%20change%20in%20check.
[18] *Priority Climate Action Plan State of Maryland*. Maryland Department of the Environment. (Mar. 2024).
https://www.epa.gov/system/files/documents/2024-03/mde-state-of-maryland-cprg-priority-climate-action-plan.pdf

SB 949 - AV Auth Love Testimony.docx.pdf
Uploaded by: Sara Love
Position: FAV

Sara N. Love
Legislative District 16
Montgomery County

Judicial Proceedings Committee

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THE SENATE OF MARYLAND
ANNAPOLIS, MARYLAND 21401

SB 949 - Vehicle Laws - Fully Autonomous Vehicles

Chair Smith, Vice Chair Waldstreicher, members of the Judicial Proceedings Committee, it is my pleasure to present Senate Bill 949 - Vehicle Laws - Fully Autonomous Vehicles. If enacted, this bill would authorize the use of autonomous vehicles on Maryland's roads.

Fully autonomous vehicles are operated without a human driver. SB 949 creates a robust set of rules an autonomous vehicle would need to meet in order to legally use the roads in Maryland and authorizes the Maryland Motor Vehicle Administration (MVA) and the Maryland Insurance Administration (MIA) to establish the standards and requirements necessary for autonomous vehicles to operate safely here in Maryland. There are also provisions – worked out with law enforcement - to include our first responders and public safety officers, so they have the training, protocols, and understanding of how these vehicles work and what interactions with autonomous vehicles would look like.

We will have two sets of amendments: the first was developed alongside the MVA and MIA to ensure that the bill will allow them to effectively regulate what for Maryland will be a new industry, including the ability to pull them off the roads if they are found to be unsafe.

Second, we will have amendments to guard the privacy of both the users of these vehicles and of the others around these vehicles. By necessity AVs have a lot of cameras and take in a lot of data in order to operate safely. These amendments will ensure that the data collected is not sold or transferred, that no facial recognition is run on any faces that are captured, and that data that is not necessary is not kept.

To date, 25 states have passed substantially similar legislation, including our neighbors Pennsylvania and West Virginia, as well as states such as Michigan, Florida, Arizona, New Mexico, and Texas. A complete list is attached to my testimony. In addition, Virginia and DC are also looking into passing such a law. By passing SB 949, we would join those states in creating the conditions necessary to allow for autonomous vehicles on our roads.

AVs are a part of everyday life for hundreds of thousands of Americans every month. Whether they be passengers who cannot drive themselves or do not wish to, they can access autonomous vehicles providing them freedom of movement and an additional choice in how to interact with the world.

Sara N. Love
Legislative District 16
Montgomery County

Judicial Proceedings Committee

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THE SENATE OF MARYLAND
ANNAPOLIS, MARYLAND 21401

An autonomous vehicle doesn't drive drunk, read its phone, get tired, or respond emotionally to other road users conduct; they don't speed or break the law. As a result, in states where they currently operate, data show that autonomous vehicles are significantly safer than a human driver.

Waymo, who is here with me today, currently operates in 6 markets; their fleet, operated as a wholly owned ride-hail service, provides rides for more than 200,000 customers per week, covering more than 1 million miles on public roads in the United States. Their data show: 81% fewer rashes involving airbags, 78% fewer injury-causing crashes, and 62% fewer police reported crashes compared to a human driver.

There has never been a fatality resulting from an interaction with an autonomous passenger vehicle. Waymo has never been the initiator of a crash involving one of their vehicles. Under the bill the vehicles can get a speeding ticket (the cars can respond to officers like you or might via cameras and microphones) and are required to meet the same insurance standards as any other road user.

Autonomous vehicles offer a safer alternative for those who could be subject to the biases of a human driver, including members of the blind community, who have many stories of other ride-sharing drivers refusing to pick them up.

Autonomous vehicles will come to our roads having gone through rigorous testing, mapping, and small-scaled deployment that grows responsibly and responsively to local communities.
This bill is a foundational piece in the puzzle of expanding transportation options for all Marylanders.

For the foregoing reasons, I respectfully request a favorable report on Senate Bill 949.

SB 949 attachment list of 25 states -- Love testim

Uploaded by: Sara Love

Position: FAV

SB 949 – Vehicle Laws – Fully Autonomous Vehicles

25 States Where Substantially Similar Authorizations are Law

Going West to East:

- California
- Nevada
- Utah
- Arizona
- Colorado
- New Mexico
- Texas
- North Dakota
- South Dakota
- Nebraska
- Kansas
- Oklahoma
- Iowa
- Arkansas
- Louisiana
- Mississippi
- Tennessee
- Alabama
- Kentucky
- Michigan
- Florida
- Georgia
- North Carolina
- West Virginia
- Pennsylvania

States with AV Testing Explicitly Allowed

- Hawaii
- Washington

- Ohio
- New York
- Maryland
- DC
- Vermont
- New Hampshire
- Massachusetts
- Connecticut
- Maine

2025 SB0949 Testimony Against 2025-03-05.pdf
Uploaded by: Alan Lang
Position: UNF

Testimony Against SB0949

Honorable Senators

Please enter an unfavorable report against SB0949.

I am against:

- Establishing certain standards and requirements for the operation of fully autonomous vehicles on highways in the State;
- requiring, before operating a fully autonomous vehicle on a highway in the State,
- a person to submit a law enforcement interaction plan to the Motor Vehicle Administration; and
- establishing that a State agency or local political subdivision may not prohibit the operation of fully autonomous vehicles on highways under their jurisdiction.

I do not believe that fully autonomous vehicles are ready to be operated on our roads at this time.

They are not proven and still unsafe.

Please vote against HB0949.

Alan Lang
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Alanlang1@verizon.net
March 5, 2025

testimony2025sb949.pdf
Uploaded by: Franz Schneiderman
Position: UNF

Auto Consumer Alliance
13900 Laurel Lakes Avenue, Suite 100
Laurel, MD 20707

Testimony to the Senate Judicial Proceedings Committee
SB 949 – Vehicle Laws – Fully Autonomous Vehicles
Position: UNFAVORABLE

The Honorable Will Smith
Judicial Proceedings Committee
2 East, Miller Senate Building
Annapolis, MD 21401
cc: Members, Judicial Proceedings Committee

March 5, 2025

Dear Chairman Smith and Committee Members,

I'm a consumer advocate and Executive Director of Consumer Auto, a nonprofit group that works to secure safety, transparency, and fair treatment for Maryland drivers and consumers.

We oppose **SB 949** because we are concerned that it would put Marylanders at unnecessary risk by, for the first time, explicitly authorizing the widespread private use of autonomous cars and trucks on Maryland highways – at a time when the industry continues to face serious safety questions, public faith in AV technology is limited, federal regulators are yet to establish clear or rigorous safety standards for autonomous vehicles, and Maryland lacks a legal framework of its own to regulate such vehicles.

While AV advocates often claim their vehicles are safer than conventional cars, the data on that issue are murky at best. Data from California in 2022, for instance, showed that the crash rate for AVs was much higher than for more conventional vehicles – with 96.7 out of 1,000 (i.e. almost 10%) of AVs getting in a crash (vs. 7.0/1,000 for all cars) and 26.3 crashes per million miles driven among AVs (vs. 0.7 per million for all cars.)[1] Another study widely reported last year found that AVs appeared to have lower crash rates overall but "also found self-driving cars had a crash rate five times as great as human drivers when operating at dawn and dusk, along with almost double the accident rates of human drivers when making turns."[2] And many analysts have noted how AVs struggle to deal with unusual or sub-optimal road conditions or situations they may not be programmed to handle.[3]

Part of the reason for this is that, for all their high-tech sensors, as Dr. Missy Cummings, a leading AV expert and head of George Mason University's Autonomy and Robotics Center, notes: "the computer vision systems in these cars are extremely brittle. They will fail in ways we simply don't understand."[4] And at this point we have no federal safety standards for AV software or vision systems.

As a Brookings report from July 2024 argued, the data just don't support faith in the superior safety of AVs at this point: "However easy it is to assume that self-driving cars must be safer, it is a mistake… The best conclusion for now seems to be that the safety advantages of self-driving cars are aspirational but have not been proven."[5]

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[1] https://www.statista.com/chart/32985/collisions-crashes-per-motor-vehicle-vehicle-miles-traveled-by-type-of-vehicle/
[2] https://www.newscientist.com/article/2435896-driverless-cars-are-mostly-safer-than-humans-but-worse-at-turns/
[3] https://www.nytimes.com/2023/10/11/opinion/driverless-cars-san-francisco.html
[4] https://www.nytimes.com/2023/10/11/opinion/driverless-cars-san-francisco.html
[5] https://www.brookings.edu/articles/the-evolving-safety-and-policy-challenges-of-self-driving-cars/

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Given such problems, and some deadly, well-publicized crashes caused by AV malfunctions, it's not surprising that public faith in AV technology is limited – and seems to be falling. In 2023 68% of Americans told AAA last year that they were outright afraid of self-driving vehicles (up from 55% in 2022) while just 9% said they trusted the technology. [6]

To be fair, **SB 949** does make an effort to establish some rules of the road for AVs and does stipulate that autonomous vehicles on state roads must be capable of operating "in accordance with Maryland vehicle law" and "in compliance with all applicable federal motor vehicle safety standards." But this offers little reassurance that they will be safe, as Maryland has not developed regulations specific to AV tech and, more troublingly, Congress and the lead federal auto safety agency (NHTSA) have yet to establish such standards.

Indeed, in May 2023, Jennifer Homendy, the chair of the National Transportation Safety Board lamented that, "The federal government isn't doing their job in that area… The NTSB has called on regulators to set performance minimums for these features [AVs], to test vehicles rigorously against those standards and provide the results to consumers. But we're still waiting." [7]

Two years later, we're still waiting. Worse still, a couple weeks ago the Elon Musk-led DOGE group apparently fired half the people working on a special task force NHTSA had established to examine AV safety and about 10% of the agency's workforce. This will almost surely leave NHTSA even less prepared to oversee AV tech effectively. As one of the fired engineers remarked, "If the question is, will this affect the federal government's ability to understand the safety case behind Tesla's vehicles, then yes, it will."[8]

To this point, Maryland has (wisely, I think) moved slowly on this unproven technology. While MDOT has articulated a "Vision for Connected and Automated Vehicles" and the state passed legislation in 2023 that authorizes limited conversions of vehicles into AVs, mostly for off-road commercial and industrial uses, the state has not acted to authorize widespread private use of AVs on public roads.

SB 949 would change that equation dramatically by allowing a person (or a transportation network or a for-hire vehicle firm) to operate "a fully autonomous vehicle on a highway in the state without a human driver" and, in fact, specifically precluding a state agency or local government that may have concerns about their safety from prohibiting their operation. While I know the bill sponsors are looking at amendments that may provide additional safeguards (and I'm happy to discuss those ideas), as written the bill's safety provisions are really rather modest: They require, basically, that the vehicles meet state and federal laws and that the AVs can achieve a "minimal risk condition" and submit a plan for interaction with law enforcement after a crash or failure.

I fear those stipulations leave serious safety concerns unresolved, especially given that (as noted above) no system of federal or state regulations to ensure AV safety yet exists. Safety advocates also note that

[6] https://info.oregon.aaa.com/aaa-fear-of-self-driving-cars-on-the-rise/
[7] https://www.cnn.com/2023/05/06/business/ntsb-automatic-driving-safety/index.html
[88] https://www.washingtonpost.com/business/2025/02/21/musk-doge-tesla-autonomous-vehicles-nhtsa/

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what AV systems may deem a "minimal risk condition" after a system failure may not be a safe situation for other drivers at all.

As drafted, the bill also sets no limits on the size or number of AVs allowed on Maryland roads. It could therefore enable an unlimited number of large AV trucks, as well as smaller self-driving cars, to be on our roads – all while specifically prohibiting state agencies or local jurisdictions or from setting up even local prohibitions on them. The safety concerns this might raise in sensitive or risky areas like school zones or areas with a high density of pedestrian traffic are serious.

Until or unless we have clear data, reviewed carefully by experts outside the industry itself, that shows AV vehicles (including trucks) are safe and a regulatory framework in place to help ensure they will operate safely on public roads, moving to allow their widespread use (in unlimited numbers, in fact) -- as **SB 949** would do -- would, I fear, expose Maryland drivers to serious, ill-understood, and unnecessary risks.

We oppose SB 949 and ask you to give it an UNFAVORABLE report.

Sincerely,

Franz Schneiderman
Consumer Auto

Steinbach on SB 0949.pdf
Uploaded by: Mark Steinbach
Position: UNF

8111 Thoreau Drive
Bethesda, MD 20817
March 3, 2025

The Honorable Will Smith
Judicial Proceedings Committee
2 East, Miller Senate Office Building
Annapolis, MD 21401

Re: SB 0949

Honorable Chair Smith and Members of the Committee,

I am a Past President of the nonprofit Maryland Consumer Rights Coalition (now Economic Action MD), but the views expressed in this letter opposing SB 0949 are solely my own. Yet as a Maryland resident who drives and walks a dog daily, these views represent those of the majority of Marylanders concerned with their and the public's safety. Per the AAA's latest survey released just **one week ago**, only 13% of the public trust them, while 61% remain afraid or unsure (26%).[1]

All of us – especially 76 year old seniors like me – look forward to the day when autonomous vehicles can safely operate on our streets and highways. We fear the dreaded talk: "Grandpa, it's time to discuss taking away your car keys." But neither Grandma nor I would willingly put our lives at risk now, or endanger nearby pedestrians or motorists, by relying on unproven driverless car technology that so clearly is not yet ready for prime time – when the risk of misplaced trust can mean death or catastrophic injury.

Look at the experiences of places where driverless cars have been allowed. Take the horrific reporting on deaths and injuries just with Tesla vehicles operating under its Autopilot or Full Self Driving mode.[2] There's the video of a self-described "tech guy" in January 2025 whose driverless Waymo car in Arizona kept taking him around in circles; he was trapped, with no way to exit the car.[3] School crossing guards in San Francisco scared parents everywhere by reporting many "close calls" with driverless cars.[4] Driverless cars

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[1] https://newsroom.aaa.com/2025/02/aaa-fear-in-self-driving-vehicles-persists/#:~:text=ORLANDO%2C%20FL%20(Feb.%2025,in%20a%20self%2Ddriving%20vehicle

[2] https://www.tesladeaths.com/, cited in this extensive Wikipedia compendium: https://en.wikipedia.org/wiki/List_of_Tesla_Autopilot_crashes#GaoYaning

[3] https://www.youtube.com/watch?v=5EMs13Gk7Q8

[4] https://www.nbcbayarea.com/investigations/school-crossing-guards-driverless-cars-close-calls/3544306/

have blocked many intersections;[5] driverless cars have driven the wrong way down a street toward oncoming traffic.[6] A female rider was trapped in a driverless car when guys wanting her phone number refused to move.[7] Driverless cars have struck pedestrians and bicyclists.[8] The list goes on and on.

As elected representatives, you and your colleagues may be taking a career threatening risk should this bill pass. We all know the media loves to cover incidents involving driverless vehicles (and these days, incidents increasingly are caught on video). And when accidents inevitably begin with driverless cars in Maryland, outraged citizens will want to know who let these cars on our streets. As reporters dig into these stories in Maryland, your constituents will be shocked if they discover YOU voted to allow driverless cars on our streets **knowing** that neither the federal government nor the state of Maryland first required each of these companies demonstrate their vehicles operate reliability and safely without a licensed human behind the wheel. You can and must insist that these companies **actually prove their vehicles can be driven reliably and safely** before they are allowed on our roads.

While companies pooh-pooh real-life problems, can they really be trusted when, under SB 0949, they merely have to "self-certify" their vehicles meet the definitions and conditions of the bill? Take, for example, the company fined $500,000 for not telling the truth about an incident in which its driverless car dragged a woman underneath it.[9] Their obvious financial interests and the indisputable long history of their past vehicle malfunctions (contradicting their glowing assurances of safety) substantially undermine their credibility. The public has not been blinded by their repeatedly broken promises; let's hope the members of this Committee realize more has to be done to protect us before unproven vehicles are allowed to endanger defenseless pedestrians, bicyclists and drivers in Maryland.

I ask you to stand up for safety and for your constituents. Please give an unfavorable report on SB 0949. Driverless vehicles are not yet ready for prime time, but I hope their day will come.

Sincerely,

Mark Steinbach

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[5] Google "driverless cars block intersections" including in Houston, Austin and San Francisco
[6] https://www.youtube.com/watch?v=JUCUBK6cqVg
[7] https://www.sfchronicle.com/bayarea/article/men-stop-waymo-sf-woman-passenger-video-19808703.php
[8] Google "driverless cars hit pedestrians" and "driverless cars hit bicyclists"
[9] https://abc7news.com/post/cruise-pay-500k-fine-lying-driverless-car-dragging-woman-2023-crash/15548339/

SB0949 – MVA - LOI - Vehicle Laws - Fully Autonomo

Uploaded by: Matt Mickler

Position: INFO

March 5, 2025

The Honorable Will Smith
Chair, Senate Judicial Proceedings Committee
3 Miller Senate Office Building
Annapolis, MD 21401

RE: Letter of Information – Senate Bill 949 – Vehicle Laws - Fully Autonomous Vehicles

Dear Chair Smith and Committee Members:

The Maryland Department of Transportation (MDOT) takes no position on Senate Bill 949 but offers the following information for the Committee's consideration.

SB 949 establishes a statutory framework for the operation of fully autonomous vehicles (AVs) on Maryland roadways. The MDOT recognizes that, if implemented appropriately, AVs provide an opportunity to improve safety on the roadways and transportation accessibility. As of 2024, 24 states have expressly authorized deployment of autonomous vehicles with approaches similar to this bill.

The Motor Vehicle Administration (MVA) has taken a lead role in guiding the development of Connected and Autonomous Vehicle (CAV) policy in Maryland. The MVA has chaired the CAV working group since 2015 to bring together all interested parties to work together on the issue, including industry, first responders, safety advocates, and government; this stakeholder approach has been recognized as a successful model across the country. While the MVA has issued a number of testing permits to entities to test CAVs in Maryland, there are currently no active testing permits in Maryland.

The framework for SB 949 would expressly authorize the use of AVs within their designated operational design domain. The vehicle would be considered the driver of the vehicle, and there would be no need for human driving intervention. The vehicle's liability limits would apply, and the vehicle owner would be liable for its operation. In short, with this legislation, AVs would essentially be treated as any other vehicle on the road, except that the vehicle could not subject to citation for laws naturally applying to only "human" behavior, such as impaired and distracted driving.

The MVA's role would be to issue a distinctive registration and to collect and disseminate information on the registered AV to first responders. It would require a new process for registering these vehicles, though the MVA system can record the level of autonomy for a vehicle. The MVA is familiar with dissemination of first responder plans through the current testing permit process.

The MVA is in discussion with the bill sponsor to include an amendment to authorize the Administration to suspend the registration of an AV if the vehicle presents safety concerns similar to how the California Department of Motor Vehicles was able to quickly suspend permits issued to Cruise when a vehicle struck a pedestrian in San Francisco in 2023. This legislation will need to give sufficient authority to MVA to ensure that the Administration can secure the safety of Maryland's roadways.

For these reasons, the Maryland Department of Transportation respectfully requests that the Committee consider this information when deliberating Senate Bill 949.

Respectfully submitted,

Christine E. Nizer
Administrator
Maryland Motor Vehicle Administration
410-787-7830

Matthew Mickler
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Maryland Department of Transportation
410-865-1090