



---

Washington Office  
607 14<sup>th</sup> Street, NW, Suite 200  
Washington, D.C. 20005  
202/942-2050  
FAX: 202/783-4788

August 31, 2020

The Honorable James Owens, Deputy Administrator  
National Highway Traffic Safety Administration  
U.S. Department of Transportation  
1200 New Jersey Avenue, SE  
Washington, DC 20590

RE: Notice and Request for Comment; Automated Vehicle Transparency and Engagement for Safe Testing (AV TEST) Initiative [Docket No. DOT–NHTSA–2020–0070]

Dear Deputy Administrator Owens:

AAA appreciates the opportunity to provide input as the National Highway Traffic Safety Administration (NHTSA) seeks public comment on the Automated Vehicle Transparency and Engagement for Safe Testing (AV TEST) Initiative web pilot. The agency notes in the request for comment (RFC) that “the AV Test Initiative seeks to enhance public education and engagement with public ADS vehicle testing.” AAA shares NHTSA’s desire to expand the information that is available to consumers and wants to emphasize that this effort will be an important first step in providing consumers with one centralized and comprehensive resource regarding testing operations and requirements in the United States.

Through research and testing, AAA also aims to help educate our members, the public and other stakeholders on the opportunities and challenges associated with automated driving systems (ADS). AAA has conducted testing on a number of advanced driver assistance systems through our engineering team, and the AAA Foundation for Traffic Safety has conducted research on consumer perspectives and attitudes about these technologies and how consumers digest information about these systems. This combined approach gives us **a well-rounded perspective** on the benefits and limitations of vehicle technologies, and as a result, we see a clearer picture of the challenges and opportunities for consumer education, policy engagement, and industry collaboration.

In addition to focusing on public education and consumer resources, the RFC also asks how the agency might “enhance the quality, utility, and clarity of the information to be collected.” Examples of AAA and the AAA Foundation’s contributions to date that the agency may find useful when developing the AV Test Initiative web pilot are outlined below:

- Since 2014, AAA has tested elements that are considered to be the building blocks of automated vehicles: blind spot warning,<sup>1</sup> lane departure warning/lane keeping assistance,<sup>2</sup> automatic emergency braking,<sup>3</sup> active parking assistance,<sup>4</sup> and adaptive cruise control.<sup>5</sup>
- In 2018, AAA conducted primary research to characterize the performance of SAE International Level 2 autonomous vehicle (AV) systems available in the United States.<sup>6</sup>
- In 2019, AAA released research on advanced driver assistance systems (ADAS) and proposed terminology that is intended to be simple, specific and based on system functionality.<sup>7</sup>
- In 2019, in partnership with the Automobile Club of Southern California’s Automotive Research Center, AAA released research that found that automatic emergency braking systems with pedestrian detection perform inconsistently and proved to be completely ineffective at night.<sup>8</sup>
- In 2019, AAA, Consumer Reports, J.D. Power and the National Safety Council came together to adopt standardized naming for ADAS technology in an effort to foster consistency and reduce confusion.<sup>9</sup> In 2020 the U.S. Department of Transportation,<sup>10</sup> SAE,<sup>11</sup> and PAVE<sup>12</sup> also endorsed the ADAS common naming effort.
- In 2020, AAA, in partnership with the Automobile Club of Southern California’s Automotive Research Center and AAA Northern California, Nevada and Utah’s GoMentum Station, tested vehicles with active driving assistance on both closed-course routes and naturalistic driving.<sup>13</sup>

#### The AAA Foundation for Traffic Safety:

- Co-hosted forums in 2017,<sup>14</sup> 2018,<sup>15</sup> and 2019<sup>16</sup> on the impact of vehicle technology and automation on road users, attended by representatives from the automobile and technology industries, government, private research facilities, and university transportation centers.

<sup>1</sup> AAA Advises Drivers to Know the Limits When Using Blind Spot and Lane Departure Systems. (2014). Retrieved from: <https://newsroom.aaa.com/2014/12/new-car-technologies-still-working-kinks-says-aaa-assessment/>

<sup>2</sup> Ibid.

<sup>3</sup> AAA Tests Reveal Automatic Emergency Braking Systems Vary Significantly. (2016). Retrieved from: <https://newsroom.aaa.com/2016/08/hit-brakes-not-self-braking-cars-designed-stop/>

<sup>4</sup> AAA finds self-parking technology lacks consumer trust, outperforms drivers. (2015). Retrieved from: <https://newsroom.aaa.com/2015/09/americans-steer-away-from-autonomous-parking/>

<sup>5</sup> AAA study reveals that lack of experience with advanced systems could put motorists at risk. (2014) Retrieved from: <https://newsroom.aaa.com/2014/05/automated-vehicle-systems-not-a-substitute-for-driver-engagement/>

<sup>6</sup> AAA. (2018). Level Two Autonomous Vehicle Testing: AAA propriety research into the performance of SAE Level 2 autonomous systems. Retrieved from: <https://newsroom.aaa.com/2018/11/americans-misjudge-partially-automated-driving-systems-ability-based-upon-names/>

<sup>7</sup> Advanced Driver Assistance Technology Names: AAA’s Recommendations for Common Naming of Advanced Safety Systems. Retrieved from: <https://newsroom.aaa.com/2019/01/common-naming-for-ad-as-technology/>

<sup>8</sup> Automatic Emergency Braking With Pedestrian Detection. Retrieved from: <https://newsroom.aaa.com/2019/10/aaa-warns-pedestrian-detection-systems-dont-work-when-needed-most/>

<sup>9</sup> Clearing Up The Confusion: Recommended Common Naming Advanced Driver Assistance Technologies. Retrieved from: <https://newsroom.aaa.com/2019/11/aaa-consumer-reports-j-d-power-and-the-national-safety-council-unite-to-adopt-common-naming-for-advanced-driver-assistance-technology/>

<sup>10</sup> <https://www.transportation.gov/briefing-room/us-transportation-secretary-elaine-l-chao-announces-new-initiatives-improve-safety>

<sup>11</sup> <https://newsroom.aaa.com/2020/05/sae-endorses-ad-as-common-naming-effort-led-by-aaa-consumer-reports-j-d-power-and-the-national-safety-council/>

<sup>12</sup> PAVE endorses initiative to promote common naming for advanced driver assistance systems. (2020). Retrieved from: <https://pavecampaing.org/pave-endorses-initiative-by-safety-groups-to-promote-common-naming-for-advanced-driver-assistance-systems/>

<sup>13</sup> AAA. (2020). AAA Finds Active Driving Assistance Systems Do Less to Assist Drivers and More to Interfere. Retrieved from: <https://newsroom.aaa.com/2020/08/aaa-finds-active-driving-assistance-systems-do-less-to-assist-drivers-and-more-to-interfere/>

<sup>14</sup> 2017 Forum on the Impact of Vehicle Technologies and Automation on Users: A Summary Report <https://aaafoundation.org/2017-forum-impact-vehicle-technologies-automation-users-summary-report/>

<sup>15</sup> 2018 Forum on the Impact of Vehicle Technologies and Automation on Vulnerable Road Users and Driver Behavior and Performance: A Summary Report <https://aaafoundation.org/2018-forum-on-the-impact-of-vehicle-technologies-and-automation-on-vulnerable-road-users-and-driver-behavior-and-performance-a-summary-report/>

<sup>16</sup> 2019 Forum on the Impact of Vehicle Technologies and Automation on Users – Design and Safety Implications: A Summary Report <https://aaafoundation.org/2019-forum-on-the-impact-of-vehicle-technologies-and-automation-on-users-design-and-safety-implications-a-summary-report/>

- In 2018, released results of a survey of over 1,200 owners of vehicles equipped with ADAS. The data reflects owners' opinions about, understanding of, and experiences with the ADAS technologies.<sup>17</sup>
- In 2019, released research examining driver behavior when driving vehicles equipped with ADAS, such as adaptive cruise control or lane-keeping assistance.<sup>18</sup>
- In 2019, released research examining people's perceptions and expectations of AV technologies.<sup>19</sup>
- In 2020, released research examining how the quality of a driver's understanding of advanced vehicle technology, also known as a mental model, impacts his or her performance and safety.<sup>20</sup>

Along with providing information from entities developing and testing vehicles equipped with ADS, AAA recommends that future versions of the AV TEST Initiative web platform include information provided by consumer and safety groups that evaluate vehicle technologies with the goal of educating consumers on the safety benefits, capabilities and limitations of these applications.

While we understand that the AV TEST Initiative is a purely voluntary endeavor, to make the information that it collects and disseminates valuable to the public, we recommend that NHTSA strongly encourage all ADS operators participating to supply a core set of information on a quarterly basis, and to update that information when key factors, such as an expansion of an ADS operator's Operational Design Domain (ODD), occur. The core information provided should include:

- Description of the AVs being tested (vehicle type and high-level description of AV technology)
- Number of AVs being tested
- Description of the AV's Operational Design Domain (ODD), consistent with the lexicon used in the Automated Vehicle Safety Consortium's best practices document,<sup>21</sup> and including details such as speed and weather conditions in which the AVs can operate
- Whether the AVs being tested have a backup driver or are driverless
- Description of the AV testing activity
- Expected or actual vehicle miles traveled in autonomous mode by the AVs being tested, based on a fleet average, as a proxy for frequency of on-road testing activity.

This information would provide the public with a basic set of information about where and how automated driving systems are being tested, raising awareness about this technology and providing transparency regarding ADS operators' activities on public roads.

Furthermore, many AAA clubs are actively involved in ADS initiatives at the state level that may also help inform the agency as it develops the AV Test Initiative web pilot. Some examples include:

---

<sup>17</sup> McDonald, A., Carney, C. & McGehee, D.V. (2018). Vehicle Owners' Experiences with and Reactions to Advanced Driver Assistance Systems. AAA Foundation for Traffic Safety. Retrieved from: <https://aaafoundation.org/vehicle-owners-experiences-reactions-advanced-driver-assistance-systems/>

<sup>18</sup> Dunn, N., Dingus, T.A. & Socolich, S. (2019). Understanding the Impact of Technology: Do Advanced Driver Assistance and Semi-Automated Vehicle Systems Lead to Improper Driving Behavior? AAA Foundation for Traffic Safety. Retrieved from: <https://aaafoundation.org/understanding-the-impact-of-technology-do-advanced-driver-assistance-and-semi-automated-vehicle-systems-lead-to-improper-driving-behavior/>

<sup>19</sup> Kim, W., Kelley-Baker, T., Sener, I., Zmud, J., Graham, M. & Kolek, S. (2019). Users' Understanding of Automated Vehicles and Perception to Improve Traffic Safety –Results from a National Survey. AAA Foundation for Traffic Safety. Retrieved from: <https://aaafoundation.org/users-understanding-of-automated-vehicles-and-perception-to-improve-traffic-safety-results-from-a-national-survey/>

<sup>20</sup> Gaspar, J., Carney, C., Shull, E. & Horrey, W.J. (2020). The Impact of Driver's Mental Models of Advanced Vehicle Technologies on Safety and Performance. AAA Foundation for Traffic Safety. Retrieved from: <https://aaafoundation.org/the-impact-of-drivers-mental-models-of-advanced-vehicle-technologies-on-safety-and-performance/>

<sup>21</sup> Automated Vehicle Safety Consortium. Best Practices Publication. Retrieved from: <https://avsc.sae-itc.org/principles-02-5471WV-44074RU.html?respondentID=26299135#Read-More>

**AAA Northern California, Nevada and Utah (NCNU):**

- Operates GoMentum Station, the nation’s largest secure facility dedicated to connected and automated vehicle testing, where comprehensive closed-course testing can take place and vehicle technologies can be evaluated.<sup>22</sup>
- Collaborated with the City of Las Vegas to introduce the nation’s first autonomous shuttle available to the public in live traffic.<sup>23</sup>
- Partnered with Torc Robotics to examine AV safety assessment criteria and to test an AV against such criteria.<sup>24</sup>
- Convened a workshop in March 2019 on AV safety metrics to advance the quantification of AV safety.
- Completed a research project with UC Berkeley and LG Silicon Valley Labs to examine the use of digital twin and parameterized testing to drive efficiency in closed-course testing.<sup>25</sup>
- Presented two papers at SAE WCX 2020, on testing automated driving systems, and on a novel collision avoidance safety metric.<sup>26</sup>
- Joined [SafetyPool](#), an initiative by the World Economic Forum to improve the safety of ADS by sharing AV scenarios and other testing data.<sup>27</sup>

**Automobile Club of Southern California’s Automotive Research Center (ARC):**

- In 2020, released the AAA Car Guide, which provides consumers with comprehensive, easy-to-read reviews of vehicles which are based on 13 criteria, including braking, fuel economy, emissions, handling, ride comfort, acceleration and the number of ADAS safety features. These vehicles are tested, scored and placed in one of five vehicle categories by ARC.<sup>28</sup>

**AAA Oregon/Idaho:**

- Club representatives serve on the Oregon Task Force on Autonomous Vehicles and the Idaho Autonomous and Connected Vehicle Testing and Deployment Committee, offering perspective on consumer education and issues surrounding the testing and deployment of AVs, including licensing and regulation, law enforcement and crash reporting, insurance and liability, and cybersecurity.<sup>29</sup>

**The Auto Club Group:**

- Club representatives serve on state AV advisory councils in Iowa<sup>30</sup> and Minnesota,<sup>31</sup> and are actively involved in AV activities in Florida.<sup>32</sup>

<sup>22</sup> GoMentum Station Owned and Operated by AAA Northern California, Nevada & Utah <https://gomentumstation.net/>

<sup>23</sup> AAA Free Self-Driving Shuttle Pilot Program. November 2017- October 2018. <http://www.aaahoponlasvegas.com/>

<sup>24</sup> Torc and AAA Northern California, Nevada & Utah run self-driving car through hazardous traffic scenarios. (2018). <https://torc.ai/torc-aaa-hazardous-traffic-testing/>

<sup>25</sup> GoMentum Station blog post on “Physical Test Efficiency via Virtual Results Analysis”: <https://gomentumstation.net/blog-2020-03-26/>

<sup>26</sup> GoMentum Station blog post on “GoMentum Presents at SAE World Congress WCX 2020 Digital Summit”:

<https://gomentumstation.net/gomentum-presents-at-sae-world-congress-wcx-2020-digital-summit/>

<sup>27</sup> <https://www.safetypool.ai/>

<sup>28</sup> 2020 AAA Car Guide evaluation criteria, vehicle reviews and an in-depth analysis of the ADAS technology can be found at [aaa.com/carguide/](http://aaa.com/carguide/)

<sup>29</sup> Oregon Taskforce on Autonomous Vehicles report to state legislature. (2018). Retrieved from: <https://www.oregon.gov/ODOT/Get-Involved/Documents/AVTF-2018-report-final.pdf>

<sup>30</sup> Iowa DOT Cooperative Automated Transportation Service Layer Plan. (2019). Retrieved from: <https://iowadot.gov/TSMO/IowaCAT.pdf> and Iowa Advisory Council on Automated Transportation (ATC) Public Safety & Enforcement Subcommittee. (2020). <https://www.iowadrivingav.org/pdf/20200804-PSE-meeting-notes.pdf>

<sup>31</sup> Minnesota Department of Transportation Connected and Automated Vehicles Stakeholder Engagement Report. (2018). <http://www.dot.state.mn.us/automated/docs/stakeholder-engagement-report.pdf>

<sup>32</sup> Metro Plan Orlando Regional Transportation Partnership. (2018). Retrieved from: <https://metroplanorlando.org/meetings/transportation-systems-management-operations-advisory-committee-10-26-18/>

**AAA Club Alliance:**

- Club hosted a TEDx Wilmington Salon<sup>33</sup> focused on the transformation of transportation and has worked with universities in the Connecticut,<sup>34</sup> Kansas,<sup>35</sup> Ohio,<sup>36</sup> and South Dakota<sup>37</sup> to host public education forums on vehicle technology. Additional public education forums are being planned in several states.
- Club representatives serve on or participate in state AV advisory councils, task forces and coalitions in Delaware,<sup>38</sup> Kansas,<sup>39</sup> Maryland,<sup>40</sup> Ohio,<sup>41</sup> Oklahoma,<sup>42</sup> and South Dakota.

**AAA Northeast:**

- Hosted AV Summits in Stamford, Connecticut<sup>43</sup> and Utica, New York<sup>44</sup> with state and federal legislators.

**AAA Western and Central New York**

- Served on a panel and led a discussion at the University at Buffalo's 5th Annual Symposium on Transportation Informatics.<sup>45</sup>
- Participated in a weeklong conference entitled The Future of Mobility: Remaking Buffalo for the 21st Century, which convened mobility and technology experts to discuss the city's future transportation needs.<sup>46</sup>

Through state and local ADS initiatives, AAA club representatives have found a thirst for information by policymakers, the media and the public on this topic. AAA is focused on the safe development and implementation of these technologies and is committed to continuing to provide objective information by conducting research, hosting summits and participating in state ADS advisory councils, task forces and coalitions. We encourage the agency to find ways to include objective, consumer-centric information in the AV TEST Initiative web platform.

In closing, AAA appreciates NHTSA's efforts to enhance public education and engagement with the development of the AV Test Initiative web pilot and hopes the above comments and resources can provide the agency with examples of beneficial research and activities in the ADS sphere. AAA believes that giving consumers greater clarity on the benefits and limitations of emerging vehicle technologies, OEM development and testing, and state operations will aid in their education, understanding and safe use of these technologies.

<sup>33</sup> AAA Club Alliance. TEDxWilmington Salon – “Who’s in the Driver’s Seat? The Transformation of Transportation”. (2017). Retrieved from: [https://www.youtube.com/watch?v=lltftp\\_8IKz0](https://www.youtube.com/watch?v=lltftp_8IKz0)

<sup>34</sup> Technology Takes The Wheel presented by AAA and University of Connecticut. (2019). Retrieved from: <https://ctsrc.uconn.edu/tttw2/#>

<sup>35</sup> Technology Takes The Wheel presented by AAA and Wichita State University. (2019). Retrieved from: <https://www.wichita.edu/research/WSUInitiatives/technologytakesthewheel.php>

<sup>36</sup> Technology Takes The Wheel presented by AAA and University of Toledo. (2020). Retrieved from: <https://www.utoledo.edu/engineering/techtakesthewheel.html>

<sup>37</sup> Technology Takes The Wheel presented by AAA and Southeast Technical College. (2020). Retrieved from: <https://www.southeasttech.edu/autonomousvehicles.php>

<sup>38</sup> Delaware Advisory Council on Connected and Automated Vehicles. (2018). Retrieved from: <https://deldot.gov/Programs/autonomous-vehicles/pdfs/EO-14-Final-Report.pdf>

<sup>39</sup> Kansas Statewide Connected and Automated Vehicle Vision Plan. (2019). Retrieved from: [https://www.ksdot.org/Assets/wwwksdotorg/bureaus/divInnovTech/KS\\_CAV\\_Vision\\_Plan.pdf](https://www.ksdot.org/Assets/wwwksdotorg/bureaus/divInnovTech/KS_CAV_Vision_Plan.pdf)

<sup>40</sup> Maryland Connected and Automated Vehicle Work Group. Retrieved from: <https://chart.maryland.gov/downloads/readingroom/StrategicPlanning/MDOT%20SHA%20CAV%20Strategic%20Action%20Plan%20-%20FINAL%20-%20Dec%202017.pdf> and <https://mva.maryland.gov/safety/Pages/MarylandCAV.aspx#MCAVWG>

<sup>41</sup> DriveOhio Alliance Regional Spotlight Webinar: Smart Mobility in Southwest Ohio. (2020). Retrieved from: <https://drive.ohio.gov/wps/portal/gov/driveohio/about-driveohio/news-and-events/alliance-webinar>

<sup>42</sup> Driving Oklahoma Work Group. (2018). Retrieved from: <http://www.okenergytoday.com/2018/10/transportation-commissioners-told-to-be-ready-for-driverless-cars/>

<sup>43</sup> AAA Northeast Forum: Navigating our Transportation Future and Preparing Connecticut for Autonomous Vehicles. (2018). Retrieved from: <http://www.ctn.state.ct.us/ctnplayer.asp?odID=15678>

<sup>44</sup> AAA Northeast Forum: Navigating our Transportation Future and Preparing New York for Autonomous Vehicles. (2019). Retrieved from: <https://madisoncountycourier.com/?p=103058>

<sup>45</sup> University at buffalo's 5th annual Symposium on Transportation Informatics. (2019). Retrieved from: <http://www.buffalo.edu/transinfo/news-and-events/events/annual-symposium/2019.html>

<sup>46</sup> Retrieved from: <https://www.buffalony.gov/CivicAlerts.aspx?AID=508>

Notice and Request for Comment; Automated Vehicle Transparency and Engagement for Safe Testing (AV TEST)  
Initiative [Docket No. DOT-NHTSA-2020-0070]

Sincerely,

A handwritten signature in cursive script that reads "Jill Ingrassia".

Jill Ingrassia  
Executive Director  
AAA Advocacy & Communications