



February 17, 2026

The Honorable Edward J. Markey
United States Senator
255 Dirksen Senate Office Building
Washington, DC 20510

Re: Aurora's Responses to Request for Information Dated February 3, 2026 Regarding Remote Assistance Operators

Dear Senator Markey:

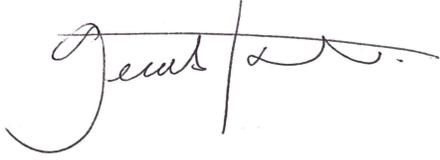
Thank you for your letter dated February 3, 2026 requesting information regarding Aurora's remote assistance function. We appreciate the opportunity to share additional details on Aurora's people and operations.

Aurora's mission is to deliver the benefits of self-driving technology safely, quickly, and broadly. We value our close partnerships with government leaders, regulators, and first responders when deploying our self-driving technology, and we are proud of the trust we have built with these stakeholders through our transparent and engaged approach. After all, our mission is aligned with that of governments across the nation: to have safer roads, a stronger economy, and a more reliable transportation system.

In this spirit, Aurora briefed your office in October 2025 on our remote assistance function. We discussed a range of topics, from how our remote assistance design prioritizes safety of the motoring public to the qualifications, training programs, and standards and policies that we have established for our remote assistance specialists. We were encouraged to learn from your staff that the briefing was informative and helpful.

We remain dedicated to constructive engagement with you and your office on this and other topics regarding self-driving technology and operations. If you have questions regarding our submission, please do not hesitate to contact me (ginteriano@aurora.tech) directly, or my colleague Melissa Wade (melissa@aurora.tech).

Best regards,

A handwritten signature in black ink, appearing to read "Gerardo Interiano". The signature is fluid and cursive, with a prominent vertical stroke separating the first and last names.

Gerardo Interiano
Senior Vice President
Government Relations and Public Affairs

Enclosure

Aurora Responses to Request for Information

Aurora's mission is to deliver the benefits of self-driving technology safely, quickly, and broadly. The Aurora Driver, our Automated Driving System (ADS), is a platform that combines hardware, software, and data services to allow vehicles to autonomously move people and goods safely and efficiently through the world. We believe that safely deployed autonomous vehicles can significantly reduce the tragic number of crashes, injuries, and fatalities that occur on U.S. public roads each year.

As far back as 2019, Aurora has publicly discussed the concept of remote assistance, and it is a topic covered in our Voluntary Safety Self-Assessments — including our [most recent edition](#) — crafted based on National Highway Traffic Safety Administration (NHTSA) guidance to demonstrate how we address priority safety design elements in developing and deploying our self-driving technology.

Over time, Aurora saw a clear need for guidance reflecting that remote assistance for autonomous vehicles is something distinct from direct, remote control. As a member of the [Automated Vehicle Safety Consortium \(AVSC\)](#), a program of SAE Industry Technologies Consortia, Aurora led the charge to create clear definitions for this function. In 2023, AVSC [announced](#) the availability of the "Best Practice for ADS Remote Assistance Use Case," to which Aurora's remote assistance function conforms. The Best Practice recognizes that remote assistance includes the provision of information or advice to an ADS from a remote location, but it cannot perform safety-critical functions like the dynamic driving task — the ADS is responsible for the behavior and maneuver, and exclusively determines how to safely execute the suggestion. The Best Practice also includes guidance on remote assistant training and response to a triggering event, among other details.

As detailed in our responses below, our remote assistance design prioritizes the safety of the motoring public and we strive to continuously enhance it as our fleet scales and as we incorporate industry best practices as they mature. Critically, the design does not allow for remote operation of Aurora's driverless trucks. Our remote assistance specialists — employees all located in the United States — are limited to providing information and advice, while the Aurora Driver remains in control of the vehicle, acting on their suggestions, to the full extent of its capability, only if and when it can find a way to do so safely.

Careers at Aurora are rewarding and mission-driven, and we are incredibly proud of the team we are building. Our remote assistance specialists are no exception. These individuals are well-qualified and trained to Aurora's high standards, and importantly, they share the organization's commitment to safety and building a positive safety culture. As employees, they are also eligible for annual bonus, equity compensation, and benefits. Our thoughtful and comprehensive policies and programs governing our remote assistance operations further ensure these employees can do their best work as they support our fleet of driverless trucks.

Specific operational details of Aurora's remote assistance operations, aspects of our cybersecurity architecture, and our internal policies are highly sensitive proprietary commercial information. If you would like additional information on these or any of the other questions below, we would be happy to brief you or your staff, upon request, in a manner that appropriately protects Aurora's proprietary information.

1. A complete description of Aurora's remote assistance operations, including:

- a. The roles and responsibilities of the remote assistance operator, such as whether the operator is limited to providing advice or instruction or is permitted to change the vehicle's trajectory or driving path;**

Our remote assistance operation includes remote assistance specialists who support our active fleet of driverless trucks by providing support should a truck request it. As previously stated, our remote assistance specialists do not operate the vehicle. Instead, they provide additional human context in response to triggers sent by a truck in certain scenarios. They are limited to providing information or advice to the truck, in the same way traditional dispatch does for human drivers today, to support it in responding appropriately to a situation that would benefit from a human's judgment (e.g., unusual road closure).

The Aurora Driver is not designed to allow for remote operation of the truck; it remains in control of the vehicle and, to the full extent of its capability, will act on a remote assistance specialist's suggestion only if and when it can find a way to do so safely.

- b. Whether your company ever allows RAOs to tele-drive a vehicle, beyond providing guidance to the AV;**

Aurora's remote assistance specialists are limited to providing information or advice and they cannot remotely drive an Aurora vehicle.

- c. The frequency with which remote assistance sessions are invoked (for example, number of sessions per vehicle-mile or per trip), and the proportion of sessions that result in human input that alters the vehicle's driving plan;**

The frequency of engagement from remote assistance varies, but in all cases, Aurora is confident in our approach and that we have the necessary procedures and protocols in place to ensure our driverless trucks are appropriately supported if remote assistance is requested.

- d. The number and location (city/state/country) of remote assistance centers or teams and number of RAOs at each location;**

Aurora's remote assistance specialists are stationed at Aurora facilities in the United States, specifically Coppell, Texas, and Pittsburgh, Pennsylvania.

- e. Whether any remote assistance operators are located outside the United States, and if so, the countries and jurisdictions involved, and how your company conducts oversight, supervision and qualification of such overseas operators;**

All Aurora remote assistance specialists are located within the U.S.

- f. The average and worst-case latency (broken down by location of each RAO center) between the vehicle and remote assistance operator from the time a request is generated by the vehicle until a human begins interaction and the time from human intervention to vehicle execution of any instruction;**

As described above, Aurora's remote assistance specialists can only provide information or advice and do not perform the driving function, meaning the Aurora Driver operates safely without them. In fact, we have established safety requirements that if a remote assistance specialist does

not respond to a driverless truck's trigger requesting remote assistance, for whatever reason, the safety of the truck should not be affected. In a situation like this, the Aurora Driver would execute a safe maneuver, such as pulling safely off the freeway.

g. Whether all remote assistance operators are required to obtain and maintain a valid driver's license while serving as an operator;

All Aurora remote assistance specialists are required to possess a basic U.S. driver's license. This requirement allows Aurora to conduct motor vehicle record checks of remote assistance specialist applicants and exclude those with a history of serious offenses, ensuring parity across our operational roles.

h. The background screening process for remote assistance operator applicants, including past experience with alcohol impaired driving;

Aurora requires that each remote assistance specialist applicant has at least five years of driving history and validates the applicant has a clean driving record through a motor vehicle record check. The applicant must also pass drug and alcohol screening.

i. Procedures and protocols in place to prevent remote assistance operators from being intoxicated while performing their duties as operators;

Aurora maintains a comprehensive drug and alcohol policy that applies to our remote assistance specialists. They are subject to reasonable suspicion drug and alcohol testing — that is, if a manager has reasonable suspicion to believe a remote assistance specialist is under the influence of drugs or alcohol at any time while performing their duties, Aurora policy requires the individual to immediately submit to a drug and alcohol test.

j. A summary of the cybersecurity architecture protecting the link between vehicle and remote assistance infrastructure, including network encryption protocols, authentication of operators, redundancy and resilience measures, and data retention and access policies; and

Effective cybersecurity is paramount to building trust in our autonomous technology. Our security approach draws from guidance from the National

Institute of Standards and Technology, NHTSA, and industry groups, and we apply diligence throughout the design, development, and operation of our driverless trucks.

With regard to remote assistance, it is important to emphasize that the Aurora Driver is designed to not allow remote control of steering, braking, or accelerator functionality. That means that neither Aurora's team members nor external actors can remote control a vehicle when it is on the road. Moreover, the Aurora Driver would not accept a recommendation from a remote assistance specialist if it is not safe to do so.

Additional information on Aurora's approach to cybersecurity is available in our [Blog Post](#) and [Driverless Safety Report](#).

k. The procedures by which remote assistance involvement is logged, audited, and reviewed for safety analysis, particularly during crashes or other safety incidents.

Aurora monitors each remote assistance session for the purposes of product enhancements. A session begins recording as soon as a remote assistance specialist opens Aurora's remote assistance tooling, with the session specifically linked to their unique user identification. Aurora reviews recorded sessions and associated data to further support product enhancements or updates to our internal policies. Should there be a safety event, such as a crash involving our vehicle with a remote assistance session active, our protocols require a safety analysis to be performed by Aurora's Safety Organization.

2. A detailed description of any recorded crash or disengagement event (or near-miss) in which remote assistance played a causal or contributory role, whether through advice, instruction, or operator override. For each event, please provide the date, location, description of remote assistance involvement, outcome (damages and injuries, if any), lessons learned, and remedial actions taken.

As described above, our remote assistance specialists do not operate the vehicle, and they are limited to providing information or advice to a driverless truck. The

Aurora Driver remains in control of the vehicle, acting on their suggestions, to the full extent of its capability, only if and when it can find a way to do so safely.

3. A description of your company’s training, qualification, and monitoring practices for remote assistance operators, including how performance is measured, what credentials and oversight apply, how many hours RAOs work per shift, and how your company manages fatigue, distraction, and user-error for remote operators.

Qualifications. Aurora hires talented people who are ready to help build a transportation ecosystem that will make our roads safer, get crucial goods where they need to go, and make mobility more efficient and accessible for all. Beyond holding a basic U.S. driver’s license and having a clean driving record, a successful remote assistance specialist has to pass required training to perform the task of responding to triggers from our driverless trucks. Some of the other skills needed include the ability to focus, prioritize, and make strategic decisions; keen attention to detail; and excellent communication skills. Aurora has also cross-trained a number of its existing workforce, including former vehicle operators (i.e., commercially licensed drivers), to transition into the remote assistance specialist role.

As we think about recruiting in the future, Aurora has partnered with a variety of organizations to prepare interested individuals for a career in the autonomy and automotive fields. For example, Aurora [partnered](#) with On the Road Garage, a transportation workforce development group based in Dallas, Texas, in launching "OTR Advanced Vehicle Technology – Powered by Aurora." The program combines hands-on training and pathways to industry credentials — delivering learning experiences that mirror the real-world demands of the autonomous vehicle field. Participants are equipped with skills needed for roles related to advanced diagnostics, sensor calibration, and vehicle repair. This is an apprenticeship and upskilling program designed to prepare workers from all backgrounds and experiences for high-growth careers in the autonomous vehicle industry.

Training and performance. Remote assistance specialists must complete Aurora-developed training in order to perform their duties. Our structured training program includes specially designed coursework, shadowing, assisted practice and hands-on training, and performance reviews and skill assessments. Once in

their role, Aurora utilizes various performance metrics specific to remote assistance specialists and any associated tooling they are using. These metrics help us understand the efficiency and performance of remote assistance specialists as they interact with our tooling. In the event of user-errors, Aurora follows human error investigative frameworks to better understand how an error occurred and to identify areas of improvement, which could result in changes to Aurora's tooling or processes if appropriate.

Work hours and breaks. To support 24 / 7 driverless operations, remote assistance specialists are assigned to 12-hour day or night shifts, rotating between 4 days on / 3 days off and 3 days on / 4 days off. Remote assistance specialists receive lunch and additional breaks throughout their shift and in each case, they are instructed to leave their workstation entirely for the duration of the break.

Fatigue risk management and distraction. Aurora maintains a fatigue risk management program for all operations, including remote assistance. Each remote assistance specialist must complete fatigue management training and has access to specific fatigue time-off and fatigue reporting processes in the event they experience fatigue. Aurora implements a non-retaliatory policy for all fatigue-related reporting processes, in addition to our Safety Concern Reporting program, which provides a clear and easily accessible mechanism for employees to report potential safety issues to our Safety Organization. Safety Concern Reports are triaged, tracked, and monitored until resolution. Simply put, there is a strict non-retaliation policy for employees who report safety concerns at Aurora, and participation in our robust safety programs is everyone's obligation.

Aurora minimizes remote assistance specialist distraction by implementing a "sanitized" workspace policy. Specifically, this policy limits irrelevant conversation, personal device use, and other activities in this workspace that may cause distraction for remote assistance specialists.

- 4. A copy of any internal policies or standards by which remote assistance operations are governed, such as remote assistance operator to vehicle ratios, escalation procedures, boundaries for remote operator intervention (such as speed limits, zones, vehicle states), and fallback planning when the remote connection fails or is degraded.**

Aurora's internal policies regarding remote assistance include operational safety guidelines for remote assistance specialists to ensure they can appropriately execute their functions, covering topics like qualifications and training, standard operating procedures, and effective communications; escalation procedures; and failover planning to ensure continued operation in the event of network-related disruptions. As described above, remote assistance specialists cannot operate the vehicle, and their suggestions are only that, meaning the Aurora Driver remains in control of the vehicle and is designed to operate safely without them.

Mar 3, 2026

The Honorable Edward J. Markey
255 Dirksen Senate
Office Building
Washington, DC 20510

RE: RAO Oversight Letter

Dear Senator Markey:

May Mobility's mission is to make cities safer and more livable through autonomous driving technology that offers riders safer, cleaner and more accessible transit in the diverse communities in which we operate. Headquartered in Ann Arbor, Michigan, our commitment to safety across all levels of our technology offering is aimed at building trust with transit authorities, government officials, leading TNCs, and the riders we serve. We appreciate and share your focus on consumer safety, and are happy to share more about our safety protocols and Remote Assistance technology.

A complete description of May Mobility's remote assistance function:

(1a., 1b., 1d. & 1e.) About Remote Assistance (RA) at May

May Mobility's Remote Assistance Agents (RAAs) can only **assist** our driverless fleet by suggesting or approving driving choices proposed by the vehicle that may take it outside of its pre-approved driving behavior. Our RAAs cannot teledrive our vehicles—by design, they have zero direct access to controls or drive-by-wire systems that govern speed, braking, steering, or the vehicle's path. Thus, and for avoidance of doubt, our RA team **has no ability to drive, control, or take over a vehicle remotely.**

The guidance provided by our RAAs is implemented by our onboard automated driving system (ADS), which always remains in control. The ADS must validate and approve any suggestion made by the RAA and can reject, adjust or delay implementation of the route suggestion if real-time conditions on the road warrant doing so.

We currently employ a relatively small number of RAAs, all of whom work out of our headquarters location in Ann Arbor, Michigan. None are located outside the United States. Thanks to our expertise gained across our 20+ deployments, our RAA team has developed a deep set of proprietary RA software capabilities and protocols.

(1c. & 1f.) Remote Assistance Metrics

The rate at which our RAA team initiates sessions is continually changing due to the rapid rate our technology progresses. Past results are not indicative of future performance, and the lack of standardization of these proprietary performance metrics means that these numbers aren't comparable and could be misleading.

The latency from the vehicle to our Ann Arbor-based RA center is generally within a range of 100-140ms, a level that ensures timely communications between the vehicle and RAA.

(1g. - 1i.) Safeguards in Place for Remote Assistance

Each RAA is required to obtain and maintain a valid driver's license, as well as pass a background check that includes 1) A multi-state/multi-jurisdictional criminal check 2) A driving history check (motor vehicle report); and 3) A national sex offender database check.

Prior to every shift, each RAA is required to complete a questionnaire, which includes questions such as: 1) Are you well-rested and ready to perform your duties effectively today?; and 2) Are you sober and free from any substances that may impair your judgment or performance? RAAs are also evaluated by site management before the start of every shift to determine their capacity to perform their role that day.

(1j.) Cybersecurity

Cybersecurity is deeply embedded throughout May Mobility and is continually monitored across the organization. We work with a dedicated Vehicle Cybersecurity Operations Center that continuously monitors communications between vehicles, endpoints, and APIs, including all telemetry data and remote assistance infrastructure, to detect and respond to threats in real time.

Mutual TLS certificate authentication is required for client-to-vehicle interactions, and the system enforces controls to prevent the execution of expired or unauthorized commands. This ensures that data transmitted between vehicles and the remote assistance infrastructure is encrypted and protected against interception or tampering. Access to remote assistance platforms is protected through credential-based authentication, login attempt logging, and multi-factor authentication, with user access controls governed through a secure identity management system. We do not persist the raw data streamed to the RAA beyond the session.

Access reviews are conducted on a regular basis to ensure continuous compliance and alignment with industry standards, including SOC 2. An Endpoint detection and response solution is deployed across Remote Assistance servers to provide continuous antivirus coverage, threat detection, and patch management, ensuring all systems remain secure and actively monitored. All logs and data are governed by defined lifecycle policies and permanently deleted upon reaching their respective retention periods, in conformance with legal, operational and compliance requirements.

Access to all company facilities is managed through an access control system configured exclusively for authenticated employees. Entry is restricted to individuals whose credentials have been provisioned within the system.

(1k.) Logging Operations

All proposals made by the RAA are integrated into the vehicle log, ensuring a complete record. Furthermore, event-based tickets are generated to facilitate review of these actions. In addition, RAA shifts are screen-recorded for internal operational improvement and training purposes. In the event of an incident, the established process mandates a detailed event breakdown and risk assessment to determine the appropriate subsequent steps, which may range from continued operation to the implementation of specific mitigation measures.

(2) A detailed description of any recorded crash or disengagement event (or near-miss) in which remote assistance played a causal or contributory role, whether through advice, instruction, or operator override. For each event, please provide the date, location, description of remote assistance

involvement, outcome (damages and injuries, if any), lessons learned, and remedial actions taken:

As previously noted, the ADS, not the RAA, implements driving decisions and the RAA is incapable of overriding the vehicle. More generally, the National Highway Traffic Safety Administration (NHTSA) oversees autonomous vehicles and you can find data for all of our reported incidents here:

<https://www.nhtsa.gov/laws-regulations/standing-general-order-crash-reporting#ads>

(3) A description of your company’s training, qualification, and monitoring practices for remote assistance operators, including how performance is measured, what credentials and oversight apply, how many hours RAOs work per shift, and how your company manages fatigue, distraction, and user-error for remote operators:

Training, Qualification, Monitoring

RAAs undergo a comprehensive training, qualification, and monitoring program. Training begins with a structured multi-day bootcamp that standardizes foundational knowledge and operational skills. RAOs follow detailed learning plans and train on interactive simulations.

Prior to deployment, all RAOs must pass a strict certification process. We conduct objective proficiency assessments using standardized rubrics to evaluate trainees on policy and process knowledge as well as simulation performance. Those who successfully complete this portion move on to limited, closely supervised live-vehicle training on non-public roads. Supervised public-road training follows. This process ensures every RAO is fully qualified and prepared to safely perform their job duties when they exit the training program.

How Performance is Measured

RAA performance is measured through both data analysis and direct observation. Our RA Interactions Database is queried regularly to surface individual RAO performance data, which is reviewed to identify trends, flag concerns, and recognize strong performance. In addition, managers conduct direct, real-time observation of RAOs during active shifts to assess accuracy, decision-making, and adherence to protocols.

Credentials and Oversight

RAAs are overseen directly by the Manager of Remote Assistance, who monitors performance, ensures policy compliance, and addresses safety or conduct concerns. At a minimum, each RAA is required to hold a valid U.S. driver's license and have remote operations experience with a strong preference for RAAs that have autonomous vehicle experience and a B.S. in an AV-related field.

Hours Per Shift

Most of our RAAs work from 9:45 AM to 6:00 PM EST with a staggered shift available from 7:45 AM to 4:00 PM EST. Each shift is 7 hours and 45 minutes in duration, with 6 hours and 55 minutes of active working time after accounting for scheduled breaks.

Fatigue

We have employed a multi-faceted strategy to address fatigue. For example, we have instituted a break policy requiring each RAA to take a 10-minute break for every 75 minutes worked, in addition to a 30-minute lunch break – 80 minutes of total break time per shift. RAAs are also monitored for fatigue throughout the day and are encouraged to unplug and rest during breaks by colleagues and shift managers. If a RAA self-reports or a manager determines they are too fatigued to continue, they are immediately removed from active support. In addition to actively addressing RAA fatigue, these measures contribute to the overall well-being of the RAAs. These measures are non-disciplinary and exist solely to protect the safety and well-being of our RAAs, riders and the public.

Distraction

RAAs work in a dedicated area within May headquarters that features noise-dampening materials and is isolated from general office foot traffic. Personal cell phones and other electronic devices are kept out of sight and out of reach during shifts. RAA workstations are also restricted to job-essential tools, preventing access to general web browsing, video streaming, or any other non-work activity.

User Error

To proactively address the risk of human error, our RA Interactions Database is reviewed regularly to identify sessions that could have been handled more effectively. When such an interaction is identified, three things happen: (1) a

simulation of the real-world event is created as a training tool for continued learning; (2) a 1-on-1 counseling session is conducted with the RAA, focusing on best practices and improvement strategies; and (3) if the issue persists or is sufficiently severe despite repeated correction attempts, the RAA is terminated.

Confidential Business Information Notice

Internal metrics, policies, procedures, and standards are highly proprietary and provide substantial information regarding internal operations and technical functionality that could be used by competitors to cause May Mobility substantial economic and competitive harm. May Mobility treats many internal metrics and its policies and procedures as Confidential Business Information (CBI), and regularly protects its trade secrets. The specific information requested in Questions: 1(c); 2; and 4, constitute confidential business information, and cannot be shared in this letter, which we recognize may be published or shared for public consumption.

Should you have any additional questions, please do not hesitate to contact me.

Regards,

Nicole DuPuis



Policy and Advocacy Lead,
May Mobility, Inc.
nicole.dupuis@maymobility.com
304-433-6654



March 3, 2026

The Honorable Edward J. Markey
United States Senate
Washington, DC 20510

Re: February 3, 2026, Letter Regarding Remote Assistance Safeguards for
Motional's Autonomous Vehicle Operations

Dear Senator Markey:

I am writing in response to your February 3, 2026, letter to Motional regarding remote assistance operators and the safeguards that should accompany the deployment of autonomous vehicles ("AVs") on public roads. Motional agrees that both Congress and the public deserve to be confident in how AVs can make our roadways safer.

Motional's autonomous driving system ("ADS") performs and remains responsible for the entire Dynamic Driving Task ("DDT") during operation. Motional does not utilize Remote Assistance Operators ("RAOs"); rather, we utilize Remote Vehicle Assistance ("RVA"), which provides limited assistance to the ADS in unusual or ambiguous situations but does not operate the vehicle. As described in greater detail below, Motional's RVA is part of its overall system architecture and provides assistance in these limited instances, but at no time is control of the vehicle transferred away from the ADS, which retains full responsibility for evaluating road conditions and executing any maneuver safely.

Motional has integrated RVA into deployed operations in a support capacity rather than as a substitute for autonomy capability or as a failsafe. While the ADS remains responsible for the entire DDT, live service assistance may provide additional context in limited circumstances where ambiguity exists and help guide the vehicle to proceed safely through those situations where human judgment is beneficial. These interactions have also allowed Motional to identify opportunities to strengthen system performance, as reflected in measurable trends. In 2022, approximately 90% of remote interactions involved assistance in navigating unusual static obstacles. With advances in lane-change and other avoidance capabilities, that category now represents approximately 6% of remote assistance interactions.



Below, we address in further detail the specific topics raised in your correspondence. Motional remains committed to further discussions on these issues as needed.

How Motional's RVA Works in Practice

Involvement of RVA could occur across a few kinds of scenarios. One example is a vehicle encountering atypical traffic controls in a low-speed pickup or drop-off environment. In such cases, the vehicle will recognize the situation, come to a safe stop and request assistance from our RVA center, providing situational context and a proposed plan. The RVA agent may approve the proposed plan or suggest an alternative path plan, such as requesting two successive lane changes to take an outer lane through a congested or temporarily blocked area in a pickup or drop-off environment rather than waiting for the traffic to clear. In all cases, the ADS independently evaluates its environment at the moment of execution and will only carry out a maneuver only if it can be performed safely. If the ADS detects a safety risk, such as an object in the planned path, it will not proceed, regardless of an RVA suggestion.

What Motional's RVA Is Versus What It Is Not

Our RVA is not teleoperation. Motional's RVA agents do not steer, brake, or accelerate the vehicle, and our ADS cannot cede driving authority to a remote operator. Instead, the agent interaction is limited to high-level guidance, primarily approvals or suggested path plans, while the ADS retains control over how (or whether) to execute a maneuver safely in real time. In other words, RVA can help resolve uncertainty and provide predictable service, but it does not, and cannot, "drive the car."

When the ADS encounters an ambiguous or novel situation that would benefit from the additional context RVA can provide, it will execute a safe maneuver, such as coming to a controlled stop, and request remote assistance. These interactions typically occur while the vehicle is stationary or traveling at very low speeds. In limited circumstances, such as when encountering an unusual roadway condition or emergency scene, the RVA agent may also direct the vehicle to move to or safely stop while the situation is assessed. In all cases, the ADS remains responsible for executing the maneuver safely. If a situation cannot be resolved remotely, the vehicle remains in a minimum risk condition, and Motional may dispatch nearby field support personnel to provide in-person assistance.



Location, Reliability, and Continuity of Service

At this time, all of Motional's RVA agents are located in and operate from a center in Las Vegas, Nevada, staffed by highly trained team members. Because RVA is not teleoperation, it is not designed around continuous "real-time driving inputs" from a remote human and remains capable of safe operation in the event of degraded communications. If connectivity is lost during a support interaction, the ADS is designed to execute a Minimum-Risk Maneuver, autonomously moving to or maintaining a safe position and coming to a controlled stop as appropriate for the roadway and surrounding conditions. We monitor connectivity as part of our operations, and our system architecture is designed with redundancy and continuity in mind. We bring the vehicle to a safe state in the event of connectivity loss out of an abundance of caution and to maintain situational awareness of fleet operations.

Training and Oversight of RVA Agents

Motional's RVA agents undergo a structured training program that takes approximately 60 days, during which candidates complete classroom instruction, closed-course practice, on-the-job training, and supervised "over-the-shoulder" instruction. Supervisors are located on-site with agents and are available for escalation and oversight. Performance is evaluated using operational metrics, including successful completion of assistance interactions and the time required to connect and resolve a request. Agents also participate in regular and ongoing training intended to reinforce safe decision-making and to address new or evolving operational scenarios.

Alcohol and Impairment Standards

Motional conducts background checks for all new hires and maintains workplace policies that prohibit alcohol and drug use while on duty, communicating these expectations through onboarding and ongoing training. Any employee who exhibits signs of impairment while working is subject to immediate removal from duty and may be directed to undergo drug or alcohol testing as appropriate. Motional maintains a zero-tolerance policy for on-duty impairment, and violations of this policy result in termination.

Cybersecurity and Access Controls

Motional's RVA communications are encrypted in depth and segmented consistent with best practices, with content controls and threat detection services. Access to the RVA platform follows least-privilege principles, with physical and logical separation of duties and modern authentication practices. The platform is designed with resiliency, including redundancies at



multiple layers to support continuity of service. RVA agents have access only to exterior sensors and cameras used to understand the vehicle's surroundings; they do not have access to interior cabin sensors, interior cameras, or in-cabin audio.

Logging, Auditability, and Continuous Improvement

Remote assistance interactions are logged and retained in accordance with our data retention policy. These records support auditability and safety analysis, including review in connection with any relevant incident investigations. RVA interactions also contribute to continuous improvement as human-reviewed path plans, combined with onboard context, can become high-confidence training data intended to reduce the need for assistance over time and share learnings fleetwide.

Motional has not had a crash or near-miss in which RVA played a causal or contributory role.

We welcomed the opportunity to brief your staff on the issues addressed in your letter and are committed to providing transparency about our approach to remote assistance. We would be glad to provide additional information as needed on this topic.

Sincerely,

A handwritten signature in black ink, appearing to read "Sam Wempe", written in a cursive style.

Samuel Wempe

Senior Director of Government Relations & Public Policy
Motional



March 3, 2026

The Honorable Ed Markey
U.S. Senate
255 Dirksen Senate Office Building
Washington, D.C. 20003

Dear Senator Markey,

Thank you for your letter regarding Nuro's remote assistance operations. We appreciate the opportunity to provide clarity on our approach and to reinforce our commitment to operating responsibly as autonomous vehicles are deployed on public roads.

Nuro is an autonomous technology company founded in Mountain View, California in 2016 with the mission to better everyday life through autonomy. Nuro has been safely testing Level 4 autonomy since 2018, received the first AV Deployment Permit in California in 2020, and in the United States is currently operating in California, Texas and Nevada. Nuro is partnering with automotive OEMs and mobility providers to accelerate autonomous vehicle development through the Nuro Driver platform, a state-of-the-art autonomous driving system that combines automotive-grade hardware and AI-powered self-driving software to enable up to Level 4 systems on mobility platforms and personally-owned vehicles.

At Nuro, safety is the foundation of our technology and operations. Far too many Americans are killed or seriously injured on our roadways every year, and we believe that autonomous technology is going to be one of the key tools that will save lives and prevent injuries. To that end, we also believe that we need to be safe today in our testing in order to earn the trust necessary to scale tomorrow's safety as deployments expand. Our approach to safety and security involves multiple independent layers of protection so that if one element fails, others still prevent harm. This includes layered technical controls, rigorous operational procedures, and continuous monitoring and auditing of remote assistance interactions. To date, Nuro has operated over 1.7 million autonomous miles on public roads with no at-fault incidents.

Our autonomous driving system, the Nuro Driver, is designed to handle the vast majority of driving scenarios independently. Standard in autonomous vehicle deployment, Nuro employs well-trained human specialists who support vehicles from remote assistance centers located in the United States when the vehicle encounters uncertainty or unusual situations. Nuro's remote

assistants do not directly drive vehicles; rather, they provide limited, structured input to help the system resolve unusual or ambiguous situations, consistent with strict operational boundaries and safeguards. The Nuro Driver is the only driver and operator of the vehicle at all times when the vehicle is in driverless mode, and is designed to override remote assistant inputs that could create a risk to safety.

Nuro's remote assistance workforce is trained to a high standard, supported by structured qualification programs, ongoing performance monitoring, and policies designed to manage fatigue, distraction, and impairment. These measures are part of a broader safety management system (SMS) that governs all aspects of our deployment and operations. Nuro has developed a fatigue management program which follows SMS pillars of safety fatigue policy, risk management, program assurance, and safety promotion. The program consists of both proactive and reactive measures with multiple layers to help prevent, assess, and mitigate fatigue during operation.

All of Nuro's remote assistants who supervise vehicles in the United States have always been and continue to be located in the United States. In addition, all remote assistants are required to have and maintain a U.S. driver's license and a clean driving record. Further, all remote assistants based in California are reviewed and added to necessary AV permits by the California Department of Motor Vehicles. We have a zero-tolerance policy in regards to drug use and remote assistant intoxication, and all remote assistants are subject to regular drug testing modeled on the U.S. Department of Transportation's rules.

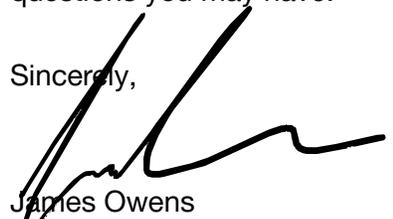
Nuro's remote assistance system achieves low latency as it is optimized for near real-time performance. It dynamically adapts to network conditions, and reduces buffering and signal disruptions — keeping total delay to just a few hundred milliseconds. Additionally, our cybersecurity architecture incorporates strong authentication, encryption, redundancy, and access controls in line with Federal guidelines to protect both vehicle operations and sensitive data. We also maintain detailed logging and review processes to ensure that every remote interaction can be analyzed for safety performance and continuous improvement. To ensure continuous safety, the system is built with multiple backups to maintain a stable connection. However, if a total connectivity loss occurs, the vehicle is programmed to automatically come to a safe state.

For Nuro, transparency with regulators and the public is a core principle, and we are committed to continuing to engage constructively in open dialogue between industry and government. We believe this is essential to realizing the full safety benefits of autonomous vehicles. Aligned with this commitment, we support thoughtful, risk-based regulation and welcome collaboration with policymakers to develop standards that enhance safety and foster public trust, while also enabling innovation.

Nuro takes seriously the concerns you raise in your letter, and we agree that transparency and accountability in this area are important for safety, privacy, and national security. Providing the specific details requested regarding Nuro's technology, operations, and data management practices in a public response could create security vulnerabilities, compromise privacy, or disclose confidential and proprietary information. For that reason, we have provided what we believe to be a complete response that addresses the concerns you raise, at a level of detail that is appropriate.

We appreciate the opportunity to address questions concerning the role of remote assistance in Nuro's autonomous operations and our commitment to building and deploying technology that saves lives and reduces collisions on our roads. We remain available to answer additional questions you may have.

Sincerely,

A handwritten signature in black ink, appearing to read 'James Owens', written over the word 'Sincerely,'.

James Owens
Chief Legal and Policy Officer

March 26, 2026

The Honorable Edward J. Markey
255 Dirksen Senate Office Building
Washington, D.C. 20510

Dear Senator Markey,

Thank you for your letter dated February 3, 2026, regarding Tesla's remote assistance program for autonomous vehicles. Safety is Tesla's highest priority, and we are deeply committed to designing and deploying systems that enhance roadway safety.

Tesla's mission is to accelerate the world to amazing abundance, and we believe the future of transportation is both electric and autonomous. Founded in 2003 and headquartered in Austin, Texas, Tesla designs and manufactures electric vehicles, battery energy storage systems, solar products, and technologies that make clean energy accessible and affordable. As a proud American manufacturer with over 100,000 employees, our teams design, build, sell, and service our products in-house. We work every day to make advanced products that are affordable and available at scale in the United States.

As you know, Tesla has operated a fully autonomous rideshare service in Austin, Texas, since June 2025. Our remote assistance roles, performed by highly trained Tesla employees located in the United States, play a critical part in supporting vehicle safety and creating meaningful, high-quality American jobs in communities across the country. As we scale our autonomous operations, we will continue to build robust remote assistance operations.

Please see responses to your specific requests set forth below.

1(a). The roles and responsibilities of the remote assistance operator, such as whether the operator is limited to providing advice or instruction or is permitted to change's [sic] the vehicle's trajectory or driving path;

Response: Tesla's automated driving system (ADS) is designed to safely perform the dynamic driving task (DDT) in both common and uncommon scenarios on public roads without the need for remote assistance. Tesla utilizes remote assistance only when the Tesla ADS or a rider requests help.

If help is requested by a rider, operators have the ability to communicate with rider(s) via bidirectional audio. If help is requested by the Tesla ADS, Tesla remote assistance operators (RAOs) are responsible for ensuring safe trip progression and are permitted to provide advice to the vehicle and to change the vehicle's trajectory or driving path, should the situation require it. Additionally, remote operators can issue discrete vehicle commands such as:

- i. Forward/reverse nudge (low-speed, short-distance repositioning)
- ii. Door lock/unlock
- iii. System reboots
- iv. Destination/way point modification

1(b). Whether your company ever allows RAOs to tele-drive a vehicle, beyond providing guidance to the AV;

Response: Tesla vehicles are not remotely driven under normal operations. As a redundancy measure in rare cases, however, RAOs are authorized to temporarily assume direct vehicle control as the final escalation maneuver after all other available intervention actions have been exhausted. RAO direct input is the last resort and is always limited in scope and duration. RAOs can only take temporary control of the vehicle at ≤ 2 mph, and if direct access is granted by the Tesla ADS, the enforced maximum speed authority is 10 mph. This capability enables Tesla to promptly move a vehicle that may be in a compromising position, thereby mitigating the need to wait for a first responder or Tesla field representative to manually recover the vehicle.

1(d). The number and location (city/state/country) of remote assistance centers or teams and number of RAOs at each location;

Response: Tesla has remote assistance centers in Austin, Texas, and Palo Alto, California. The Palo Alto RAOs are charged with providing an added layer of redundancy to the Austin service.

1(e). Whether any remote assistance operators are located outside the United States, and if so, the countries and jurisdictions involved, and how your company conducts oversight, supervision and qualification of such overseas operators;

Response: All of Tesla's remote assistance operators are located in the United States. Tesla is working to ensure that its autonomous technology is developed, manufactured,

and supported in America. To that end, all of Tesla's remote assistance operators are in-house Tesla employees and work exclusively from U.S. facilities in Austin, Texas and Palo Alto, California.

1(g). Whether all remote assistance operators are required to obtain and maintain a valid driver's license while serving as an operator;

Response: Yes, all Tesla remote assistance operators are required to have held a valid U.S. driver's license for a minimum of 3 years, and must maintain a license and clean driving record throughout their employment.

1(h). The background screening process for remote operator applicants, including past experience with alcohol impaired driving;

Response: Prior to entering service, Tesla's remote assistance operators must undergo criminal background and Motor Vehicle Record checks and successfully pass a U.S. Department of Transportation drug test. Disqualifying offenses and/or a positive drug test will preclude an applicant from serving as a remote assistance operator.

1(i). Procedures and protocols in place to prevent remote assistance operators from being intoxicated while performing their duties as operators;

Response: Tesla has a zero-tolerance policy for the use of alcohol and/or drugs by remote operators. To prioritize the safety of every ride, Tesla subjects its remote operators to random, reasonable suspicion, post-accident, and return-to-duty drug and alcohol testing in accordance with Tesla policy.

Remote assistance supervisors are specifically trained on alcohol and controlled substances misuse to help them recognize possible impairment and determine whether reasonable suspicion exists to require a RAO to undergo testing. A RAO who tests positive for drug or alcohol use, or who refuses to submit to testing, will be immediately removed from performing remote operator duties and may be subject to termination.

1(j). A summary of the cybersecurity architecture protecting the link between vehicle and remote assistance infrastructure, including network encryption protocols, authentication of operators, redundancy and resilience measures, and data retention and access policies;

Response: Tesla vehicles – including our rideshare vehicles – are designed, built, and maintained using a Tesla security framework that has been certified to the ISO 21434

international standard for cybersecurity risk management in road vehicles. Additionally, all Tesla vehicles are compliant with the applicable cybersecurity regulations in the countries where Tesla operates.

RAOs are required to complete hardware-based multi-factor authentication to initiate any remote vehicle connection. All communications between vehicles and remote assistance infrastructure, including video, audio, telemetry, and remote commands, are transmitted over authenticated and encrypted channels. All remote actions are performed within a carefully validated safety envelope, ensuring consistent and predictable vehicle behavior. This safety envelope includes requirements such as initiating direct input only from a stationary position, limiting speed and acceleration, verifying connection quality, and confirming vehicle system health before accepting any commands. Additionally, certain vehicle functionalities may be restricted to the RAO based on the vehicle's specific situation.

Consistent with Tesla's [Robotaxi Rider Privacy Notice](#), all vehicle data is stored in encrypted or de-identified formats and remains inaccessible unless triggered by a safety-critical event, user consent, or other applicable legal requirements.

1(k). The procedures by which remote assistance involvement is logged, audited, and reviewed for safety analysis, particularly during crashes or other safety incidents.

Response: All remote actions are logged throughout each session and appropriately maintained to support safety analysis and incident review. Tesla conducts weekly performance audits for selected sessions to assess remote recovery metrics and reviews relevant remote assistance data when analyzing specific failure cases, crashes, or other safety incidents.

3. A description of your company's training, qualification, and monitoring practices for remote assistance operators, including how performance is measured, what credentials and oversight apply, how many hours RAOs work per shift, and how your company manages fatigue, distraction, and user-error for remote operators.

Response: Tesla remote operators undergo extensive classroom and behind-the-wheel training, during which they gain in-depth exposure to vehicle vitals and learn the appropriate commands to initiate based on various scenarios. Tesla endeavors to select candidates for the role that already have prior ride-hailing or other in-vehicle experience

and are familiar with local driving laws and regulations. RAOs are evaluated by a team lead both after training and before RAO deployment. After completing training, RAOs reinforce their skills by simulating real-world test cases, after which they undergo reevaluation by a team lead. Upon achieving a passing score, they receive sign-off to support the production environment.

In their day-to-day duties, RAOs monitor the help request queue for vehicles and provide support only when needed. They do not connect to vehicles at will; connections occur solely when assigned through internal software. Performance is assessed through random internal audits of help request cases, where trained remote assistance leads evaluate scenarios to determine whether correct actions were taken. If a knowledge gap is identified, the RAO is temporarily pulled from active duty for additional coaching before returning to production support.

Tesla has a strong fatigue management framework in place for its Robotaxi operations. Remote assistance operators may work a maximum of 5 continuous days and work limited hours of service. Their shifts typically consist of 7.5 hours of in-seat active work, two mandatory 15-minute breaks per shift, as well as a 30-minute lunch break. Additional breaks are encouraged, subject to approval by the remote operator's team lead.

Further, rideshare operations staff receive weekly reminders during all-hands meetings encouraging getting good rest and reiterating that they must arrive "fit for duty." To manage fatigue, distraction, and user error, RAOs are not required to continue working if they report symptoms of fatigue. Internal software includes fail-safes to detect and address inattentiveness or distraction. Drowsy or fatigued driving is met with immediate removal from performance of remote operator duties and may result in termination.

Certain aspects of other inquiries in your letter would necessarily reveal highly sensitive trade secrets and confidential business practices, processes, and operational protocols that are proprietary to Tesla and fundamental to maintaining its competitive position in the AV industry.

Tesla remains committed to cooperating with appropriate regulatory and oversight processes to the fullest extent consistent with the protection of its legitimate proprietary interests. Should there be any alternative means of addressing the underlying concerns without compromising protected information, we would be pleased to discuss such options through the appropriate channels.

Thank you for your continued interest in AV safety, a shared goal, and one that is central to Tesla.

Sincerely,

A handwritten signature in black ink, appearing to read 'K. Steakley', with a long horizontal flourish extending to the right.

Karen Steakley
Director, Public Policy & Business Development

February 17, 2026

The Honorable Edward Markey
United States Senate
Washington, D.C. 20510

Dear Senator Markey,

Our mission at Waymo is to be the world's most trusted driver, and we are committed to earning the public's trust through transparency and proven road safety outcomes. As we expand our fully autonomous service across the United States, we are making long-term infrastructure investments and creating thousands of jobs for mechanics, professional drivers, and operations experts in America that support our service. We appreciate the opportunity to address your questions dated February 3, 2026, and to clarify the distinct nature of our fully autonomous driving technology.

The United States is facing a roadway safety crisis, with approximately 40,000 fatalities every year. Waymo's Autonomous Driving System (ADS) is designed specifically to address this by eliminating human errors—such as distraction, fatigue, and impairment—while strictly adhering to posted speed limits.

As we scale, we are providing safer, more accessible transportation options to a growing number of people across the country:

- We provide more than 400,000 paid trips per week across 6 U.S. cities and have surpassed 20 million lifetime trips.
- We operate a fleet of over 3,000 vehicles across six major U.S. cities.
- In our first 127 million fully autonomous miles, the Waymo Driver was involved in 90% fewer serious injury crashes or worse compared to human drivers in the same areas—a tenfold increase in safety.

It is critical to distinguish Waymo's architecture from other systems that may rely on teleoperators or remote drivers.

The Waymo Driver is fully autonomous. Our ADS is responsible for all real-time driving tasks and decision-making. We do not utilize remote drivers. While your letter drew a comparison to aircraft dispatchers, I can tell you based on my decade of experience as a U.S. Naval Aviator flying F-14s and F/A-18s there are fundamental differences:

- Aircraft Dispatchers: Responsible for active flight monitoring, weather routing, and mechanical oversight for the duration of a journey.
- Waymo Remote Assistance: These agents do not continuously monitor a vehicle or set of vehicles. Instead, they respond to specific requests for information initiated by the ADS. The agent provides a piece of data or advice, which the ADS then decides whether to use or reject. This interaction typically lasts only seconds before the agent returns to a general pool, ready to handle another request from another vehicle.

Waymo leads the industry when it comes to transparency, regularly sharing detailed safety data with the National Highway Traffic Safety Administration (NHTSA) and through our public Safety Impact Reports. We remain committed to working with Congress to enact a national AV framework.

Detailed responses to your specific inquiries are included below.

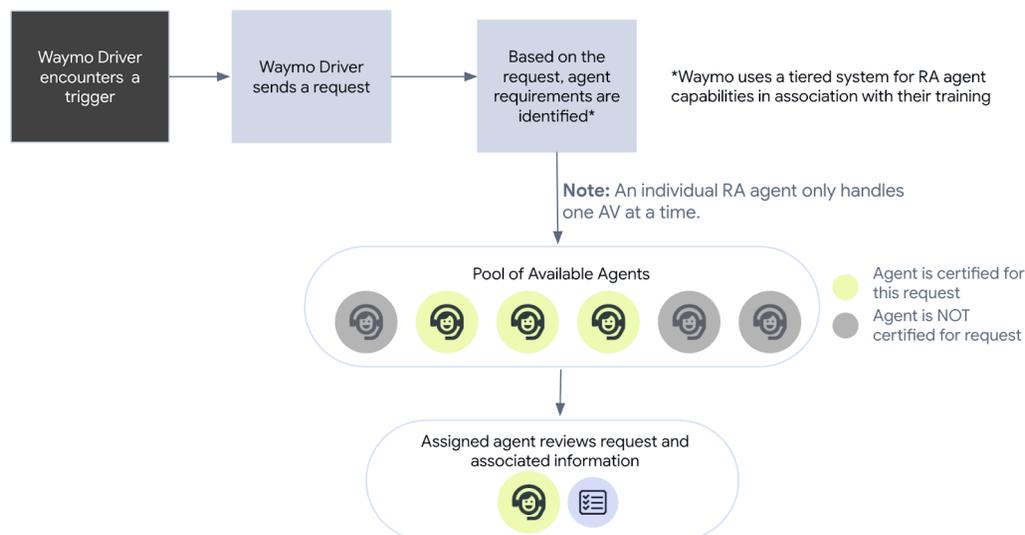
*1. A complete description of Waymo's remote assistance operations, including:
1(a) The roles and responsibilities of the remote assistance operator, such as whether the operator is limited to providing advice or instruction or is permitted to change's [sic] the vehicle's trajectory or driving path;*

Response: Waymo deploys its ADS, consisting of redundant compute, sensors, and software, to safely and fully autonomously navigate public roads. Waymo uses Remote Assistance (RA) agents, who provide advice only when requested by the ADS on an *event-driven* basis.

Waymo's RA agents provide advice and support to the Waymo Driver but do not directly control, steer, or drive the vehicle.¹

Additionally, Remote Assistance agents are not passively monitoring a vehicle or group of vehicles with the expectation to identify when intervention is needed. **Rather, the ADS reaches out to Remote Assistance when the vehicle encounters an ambiguous situation in which it may benefit from more context, even if the ADS can confidently proceed** – a helpful safety redundancy. The ADS will only be matched with an available agent who is trained and certified for the specific request.

¹ For more information about the distinctions between Remote Assistance and remote driving, see Automated Vehicle Safety Consortium. 2023. AVSC Best Practice for ADS Remote Assistance Use Case. SAE Industry Technologies Consortia, available at <https://avsc.sae-itc.com/>; SAE J3016 Taxonomy and Definitions for Terms Related to Driving Automation Systems for On-Road Motor Vehicles (2021), especially sections 3.23 and 3.24.



The average amount of time that elapses between a request to RA and the delivery of advice to the ADS - including both round-trip latency in the transmission and time for the agent to review and input a response - is a matter of seconds. During that time, the ADS remains in control of the Dynamic Driving Task, and continues to make decisions independently based on all information available to it. Most of the time, the ADS resolves its question on its own. In the event RA delivers advice to the ADS and the system proceeds, the agent returns to the “work assignment pool” where they await the next request from another vehicle that reaches out for assistance. The ADS can also reject RA suggestions if it deems it appropriate. This distinction is fundamental to our safety model, ensuring the vehicle’s onboard system remains the primary, real-time authority for safe operation. By nature, RA requests aren’t designed to help the AV with real-time collision avoidance - the ADS handles real-time driving, including evasive actions, braking or other behavior needed to avoid collisions.

Different requests to RA require different tools, and agents of different certification levels use the tools they are certified for in response to an ADS reaching out for advice.² The tasks performed by RA agents exist on a spectrum of complexity, and range from simple vehicle occupancy or cleanliness checks to suggesting paths around obstacles. The ADS remains independently in-control of the vehicle and is designed to refuse path suggestions that are unsafe, based on real-time conditions.³ We validate that the system performs as designed in every software release cycle.

² An example of a request for assistance from the ADS can be found in the [first video](#) available in our [2024 explainer](#).

³ An example of the Waymo Driver choosing to delay taking a suggested route because it has spotted a bicyclist who will shortly be in the proposed pathway can be found in the [second video](#) available in our [2024 explainer](#). When the road clears, the Waymo backs up to create space, and the remote assistant proposes the ADS re-merge onto the road. The ADS obliges and continues on its way.

Remote Assistance agents who are certified for more complex, emergent tasks are exclusively based in the United States. This specialized team is referred to as the Event Response Team (“ERT”).

Members of ERT are the most senior and experienced assistants who have received specialized training. Their primary objective is to resolve field events and support operational resilience, robustness, and stability. Activities undertaken by ERT include, but are not limited to, responding to collisions, interfacing with law enforcement and the rider, collecting data for regulatory reporting, and coordinating towing.

1(b) Whether your company ever allows RAOs to tele-drive a vehicle, beyond providing guidance to the AV;

Response: Waymo has not used remote driving or “tele-operations” where a human performs the Dynamic Driving Task. As mentioned above, we do not have humans passively monitoring the AVs as if they are engaging in normal driving, nor are there humans who are able to start driving an AV remotely.

Waymo has developed a tool that is reserved as an additional safeguard for a rare set of potential situations to assist a stopped AV fully onto the shoulder from the adjacent lane on a high speed road. In such situations, a specially trained, U.S.-based ERT agent could prompt the AV to move forward at 2 mph for a short distance at fixed steering angles to exit the travel lane. **To date, this functionality has never been used outside of training.**

1(c) The frequency with which remote assistance sessions are invoked (for example, number of sessions per vehicle-mile or per trip), and the proportion of sessions that result in human input that alters the vehicle’s driving plan;

Response: Waymo maintains detailed internal metrics on the frequency of Remote Assistance requests, categorized by city, time of day, and trip/mileage projections to ensure adequate staffing. The frequency of requests does not grow in a 1-1 ratio with vehicle miles; rather, continuous improvements to the ADS have materially reduced the rate of RA requests per mile over time. We expect this significant rate of improvement to continue, and our staffing levels will change accordingly.

This is in part why the raw number of requests to RA from the ADS, which we understand you are referring to as “invoked sessions,” is not material to understanding the performance of the ADS. Furthermore, as described above, a significant portion of requests from the ADS to RA do not result in an agent providing advice; a vast majority of requests that the ADS makes are independently resolved by the ADS before an agent even provides an answer.

1(d) The number and location (city/state/country) of remote assistance centers or teams and number of RAOs at each location;

Response: Waymo operates four geographically redundant locations in Arizona, Michigan, and in two cities in the Philippines to support its fleet. As Waymo expands around the world, it will maintain a mix of local and international RA functions to ensure seamless, safe, 24/7 global operations that match our scale.

At any given time, there are approximately 70 Remote Assistance agents on duty worldwide. Approximately half of our RA agents are located in the United States, including the entire ERT staff, with the other half located in the Philippines. These agents represent a relatively small portion of the staff supporting Waymo's fleet as we provide 400,000 trips and drive more than 4 million fully autonomous miles every week. The number of RA agents pales in comparison to the local jobs we create through our investment in our AV operations partners. In the cities we serve, we bring hundreds of job opportunities supporting our operations, including: professional drivers who validate our technology; mechanics who work on our vehicles; electricians who build and maintain our charging infrastructure; building trades professionals who construct our purpose-built depots; service specialists who ensure vehicles are ready for passengers; security personnel who keep our operations safe; and facilities managers and supervisors who oversee it all. Not only are these jobs valuable on their own, but they also provide a pathway to long-term careers in the AV industry.

1(e) Whether any remote assistance operators are located outside the United States, and if so, the countries and jurisdictions involved, and how your company conducts oversight, supervision and qualification of such overseas operators;

Response: Waymo utilizes personnel in Arizona, Michigan, and the Philippines. Overseas Remote Assistance agents must meet high standards, including: (1) possession and maintenance of a valid driver's license recognized by the Philippine Land Transportation Office, which we continuously verify; (2) achievement of a minimum B2 CEFR English proficiency level; and (3) passage of drug tests and possession of clean driving records. These agents are provided extensive training tailored to the specific tasks they will complete and their performance is closely monitored, and despite never remotely driving the vehicles, are trained on local road rules.

Oversight is conducted through vendor partners with direct Waymo supervision. Supervisors provide real-time support and conduct quality assurance that is collaborated upon with Waymo program managers. All agents are retrained every six months, and undergo drug and alcohol screening. As noted above, these agents do not handle the most complex emergent tasks, which are handled exclusively by U.S.-based ERT agents.

1(f) The average and worst-case latency (broken down by location of each RAO center) between the vehicle and remote assistance operator from the time a request is generated by the vehicle until a human begins interaction and the time from human intervention to vehicle execution of any instruction;

Response: Unlike other [U.S.](#) and [Chinese](#) companies with ambitions in autonomous driving, Waymo does not and never has used remote teleoperations because it is far more sensitive to latency than context-based Remote Assistance.

However, your assumptions about the effect of latency on RA across distances are incorrect. In this context, latency is the time required to transmit a piece of information between the RA agent and the AV (and is distinct from the time for a request to be assigned, reviewed, and issued a response). Latency by its nature can change and some latency is unavoidable, but physical distance is significantly less important than network distance. Waymo's U.S.-based RA operation centers are more than 1,000 miles apart, yet have the same latency to the vehicles. Median one-way latency is approximately 150 milliseconds for U.S. based centers and 250 milliseconds for RA based abroad. **For context, a single blink of a human eye typically lasts between 100 and 400 milliseconds.**

Alerts to confirm the occurrence of a collision are designed to reach operators in approximately 100 milliseconds. The ADS is designed to pull over with or without this confirmation upon detecting a collision. If significant latency occurs, operators are instructed to escalate, and the ADS is designed to find a safe place to pull over if they cannot maintain a stable connection. Waymo monitors the connection and has protocols for failover if operations sites go down, connections are insufficient, or other issues occur.

Furthermore, the inherent design of our ADS is optimized for handling these levels of latency because the ADS remains in charge of the Dynamic Driving Task. During communication with RA, the ADS will continue to validate suggestions from RA in performing the Dynamic Driving Task, and if the world around the vehicle has changed, the ADS is designed to respond appropriately.

As discussed above in response to question 1(a), the average total time from when the ADS issues a request until it receives a response from the RA agent, including both latency and time to review and input a response, is a matter of seconds.

1(g) Whether all remote assistance operators are required to obtain and maintain a valid driver's license while serving as an operator;

Response: Waymo requires continued licensure and clean driving records, and more details can be found above in response to question 1(e). Beyond a standard license, agents must pass

extensive internal training and certification tests for each specific task they perform. Operators must consent to the initial and periodic pulling of their driving records throughout their employment to ensure they maintain their status.

1(h) The background screening process for remote assistance operator applicants, including past experience with alcohol impaired driving;

Response: Waymo's screening process for Remote Assistance agents is rigorous and focuses on safety and the relevant skillsets for Remote Assistance tasks. Applicants must consent to a review of their driving history, including records of traffic violations, infractions, and driving-related convictions, ensuring a minimum of five years with a clean record, in addition to thorough criminal background checks. Candidates must pass drug testing as part of the hiring process, as well as color blindness and spatial recognition assessments.

1(i) Procedures and protocols in place to prevent remote assistance operators from being intoxicated while performing their duties as operators;

Response: As described in response to question 1(e) above, to ensure safety and performance, Waymo implements several protocols and procedures. Remote Assistance agents must consent to random drug testing throughout their employment. Every 3 months 45% of Remote Assistance agents undergo a random drug and alcohol test. Drug and alcohol tests are also administered at the time of hiring and for reasonable suspicion.

1(j) A summary of the cybersecurity architecture protecting the link between vehicle and Remote Assistance infrastructure, including network encryption protocols, authentication of operators, redundancy and resilience measures, and data retention and access policies; and

Response: Cybersecurity is core to Waymo's design and our safety mission. We consider comprehensive cyber threats in advance, and the safety of our ADS is protected by its design: it is independently in control of the vehicle and can refuse any guidance it deems unsafe. We have rigorous cybersecurity protocols, multi-level training programs for our RA agents, and have already participated in an [independent audit](#) of our RA program, which included cybersecurity. That's also why Waymo strongly supports the [Department of Commerce's BIS connected-vehicle rule](#), which addresses national security risks from foreign AV technology, including both software and hardware.

Our Remote Assistance tools are protected by sophisticated cybersecurity measures which use hardware backed multi-factor authentication. All Remote Assistance occurs on corporate devices which use cryptographic authentication to access corporate networks and are managed and monitored for cybersecurity.

Waymo also encrypts all communications between its vehicles and offboard support systems, including Remote Assistance, over a mutually authenticated connection.

Individual agent accounts are only granted access to the features those individual agent accounts have been certified for. Training certification is enforced by systems that these personnel do not have access to under strict controls. To maintain focus and security, personal electronic devices are strictly prohibited on the operations floor, and access to RA facilities is strictly controlled via pre-printed badges and badge-restricted areas. In the event communications with RA are lost, Waymo's vehicles are capable of continuing to drive safely to find an appropriate place to pull over.

The geographic redundancy of our operations centers further hardens our system against attack. If one center experiences an outage, work is automatically reassigned to another facility and additional agents can be deployed when needed.

1(k) The procedures by which remote assistance involvement is logged, audited, and reviewed for safety analysis, particularly during crashes or other safety incidents.

Response: Every interaction between an agent and a vehicle is meticulously logged and subject to regular audits. All RA actions are documented in proprietary databases. For crashes or safety incidents, our dedicated, U.S.-based Event Response Team ("ERT") manages the operational response, such as documenting the scene with photos, police reports, and sensor logs for internal and external reporting (e.g., to NHTSA and DMV).

Additionally, in 2025 Waymo's Remote Assistance Program underwent a comprehensive independent third-party audit by TÜV SÜD, a global standards and certification organization, to verify that internal safety processes and quality standards are being followed. The audit evaluated the robustness and safety of training and implementation practices including a multiple-day site visit to a Remote Assistance facility to observe training and daily operations firsthand. In addition, the audit evaluated if activities met the definition of Remote Assistance (as compared to remote driving). The audit confirmed the adherence of Waymo's policies and practices with the industry [best practice on Remote Assistance Use-Cases produced by the AVSC](#) consortium. To our knowledge Waymo is the first company to undertake such an audit to the Best Practice, which is considered state of the art.

3. A description of your company's training, qualification, and monitoring practices for remote assistance operators, including how performance is measured, what credentials and oversight apply, how many hours RAOs work per shift, and how your company manages fatigue, distraction, and user-error for remote operators.

Response: Our Remote Assistance program, which has been [independently audited](#) as described above, is designed to match the level of training to the complexity of the scenarios the vehicle might encounter. Qualifications are described in response to question 1(e) above.

The training program includes knowledge and skill-based education, guided observation, simulations, hands-on practice, supervised time on the live tools, and evaluation by an experienced Remote Assistance Instructor for each level. Agents must demonstrate mastery through certification testing for each specific request type before handling live requests. In addition to training at the time of hire, agents also regularly attend recurrent training as part of continuous quality improvement efforts. Additionally, training material itself is regularly audited. Training includes academic-style lectures on ADS concepts and capabilities, shadowing operators, knowledge assessments, and multiple types of skills assessment including hands-on simulation training using playback of real recorded events.

Agent performance is measured through correctness and handling time. Team leads conduct monthly coaching sessions and use quality assurance sampled events to address knowledge gaps. Agents typically work staggered shifts and dedicated shifts (e.g., 5 AM–2 PM, 1 PM–10 PM, or 9 PM–6 AM).

Fatigue is managed through a Wellness & Resilience program that assesses cognitive overload and mental health as well as a system design that keeps interactions short, allowing agents to log out and take breaks easily as tasks are automatically reassigned. Agents are encouraged to log out and take a break if fatigued; the system immediately removes them from the work assignment pool until they reconnect. Waymo imposes instant decertification for mistakes and requires remedial training before the agent can return to live operations. Waymo also requires recertification training for all agents every six months.

Confidential Business Information and Data - Questions 1(c), 2, and 4

Waymo is committed to safety and transparency, and we regularly share detailed safety performance data with the National Highway Traffic Safety Administration (NHTSA) and through our public Safety Impact Reports available at <https://waymo.com/safety/impact/>. Unlike some other reporting companies, Waymo does not redact or seek Confidential Business Information (CBI) protection over the narratives in our collision reports submitted to NHTSA. However, the specific information requested in Questions 1(c), 2, and 4, such as granular

February 17, 2026

incident-level logs, internal operational manuals, operator-to-vehicle ratios, and specific system boundaries, constitutes CBI, and is not appropriate to share in a letter such as this one which may be published or shared without legal assurance of proper protections.

With respect to question 1(c), the specific data requested constitutes strategic operational metrics and trade secrets related to the performance of our ADS. Disclosing this information would provide competitors (both domestically and internationally) with deep insights into Waymo's internal engineering progress, operational scaling strategies, and customer service functions. Such a disclosure would cause significant and unfair competitive harm to Waymo's position in a highly contested global market.

Similarly, the documents and data points requested in questions 2 and 4 contain information on technical capabilities and limitations of our ADS, strategic operational metrics, and trade secrets related to the performance of the Waymo ADS. Disclosing this information would provide competitors with insights (both domestically and internationally) into Waymo's internal processes, operational scaling strategies, and specialized safety frameworks. Such a disclosure would cause significant and unfair competitive harm to Waymo's position in a highly contested global market as well as a national security risk.

Furthermore, our internal Standard Operating Procedures (SOPs) and fallback protocols reflect Waymo's unique knowledge and expertise, and are tailored to specifics of Waymo's operations. While we cannot provide the underlying proprietary documents or procedures, we can confirm that all Remote Assistance operations are governed by rigorous safety-first principles described in detail above.

Waymo remains willing to engage with your office about Waymo's ongoing and growing operations, quantifiable safety impact, and the limited, supporting role of Remote Assistance.

To discuss these matters, please contact Stefania Yanachkov, Senior Manager of Federal Policy, at stefaniay@waymo.com.

Sincerely,

A handwritten signature in black ink, appearing to read 'R. McNamara', with a long horizontal line extending to the right.

Ryan McNamara

Vice President and Global Head of Operations, Waymo

March 3, 2026

The Honorable Edward J. Markey
United States Senate
255 Dirksen Senate Office Building
Washington, D.C. 20510

Dear Senator Markey,

We are in receipt of your February 3, 2026 letter. Zoox shares your goal of developing public trust and providing transparency as it deploys its autonomous vehicles. In the interest of this transparency, Zoox has released several public resources on our remote assistant operators, as that term is used in the letter, who we refer to as TeleGuidance tacticians, including our 2024 Operational Safety report,¹ journal post,² and YouTube videos³ demonstrating the tactician tools and processes. Additionally, we appreciate the time your staff dedicated to walking through these matters to better understand the functionality of Zoox's TeleGuidance operations.

Importantly, the Zoox automated driving system ("ADS") has been validated to perform all key functions of the dynamic driving task. As part of that validation, our TeleGuidance tacticians do not remotely operate or "tele-drive" Zoox robotaxis. Instead, TeleGuidance monitors the robotaxis in our fleet and, when requested, provides assistance or guidance via a secure, proprietary tool that allows tacticians to see what the ADS sees, hears, and actions it intends to take. Tacticians are not "in the loop" unless and until they receive a request from the ADS. In other words, the ADS will only notify TeleGuidance when it needs additional input in a particular situation. TeleGuidance tacticians, all located in the United States, then provide guidance to the ADS. For example, a tactician might help the ADS by assessing the scene or suggesting a path for the robotaxi to follow. The ADS then uses the input from the TeleGuidance tactician to decide on the appropriate action to take. The ADS remains in control of the robotaxi, and it will determine whether and how to appropriately and safely execute any guidance received from a tactician.

Safety is foundational at Zoox. To that end, we maintain numerous processes to ensure safety when tacticians provide assistance or guidance. We maintain multiple TeleGuidance operation centers in the United States to provide redundancy. This allows for the safe continuity of operations should there be an emergency at one center (e.g., a fire drill). We also monitor

¹ Operational Safety: Processes for Safe Design and Operation (2024) *available at* <https://zoox.com/common/files/igifi8r9rjykuduwbbwg4g-zoox-safety-report-volume-3-0-published-2024.pdf>

² <https://zoox.com/journal/humans-in-the-loop>

³ See, e.g., [Code to Road: How Zoox Uses TeleGuidance to Provide Remote Human Assistance to its AVs](#)

tactician utilization across centers in real time and will reduce robotaxi availability, activate additional tactician support, or transfer sessions to another center if needed.

Zoox understands your related concern about latency. Regardless of TeleGuidance tactician location, however, the design of our ADS makes this a less critical measure of safety than it would be for “tele-driving” or remote vehicle control. As explained above, Zoox’s ADS has the capability to fully operate without TeleGuidance connectivity, including to achieve a minimal risk condition (e.g., an automated pullover maneuver), and it maintains final control over the robotaxi’s trajectory, without tactician input. Therefore, tacticians are not required to respond in real time to avoid a collision. And even if a tactician’s visual or audio information is stale, the robotaxi would not act upon any resulting guidance that conflicts with reality or presents a safety risk.

Our tacticians must meet rigorous qualification requirements. Although they cannot tele-drive the robotaxi and are not responsible for driving behavior and controls, they must hold a valid driver’s license and are subject to a pre-employment motor vehicle records check. Candidates that do not meet this initial safety bar will not be considered for a tactician role. Tacticians must additionally pass a background check and drug screening and are required to demonstrate strong computer and communication skills before Zoox can make a final determination on hiring. We also maintain and enforce policies prohibiting tacticians from being under the influence of drugs or alcohol. Tacticians that violate these policies will be terminated.

We conduct robust training and monitoring of TeleGuidance tacticians, both conforming to the requirements set forth in California DMV Article 3.7 § 227.38(f) and aligning with current Society of Automotive Engineers International (SAE) recommendations for remote assistance operators. Additional training is provided when updates to tooling or geofence expansions occur. We also regularly test and audit tactician performance to mitigate risk of human error. Zoox ensures tacticians take regular breaks and lunch periods to reduce fatigue, and supervisors actively monitor performance in real-time, providing immediate support and feedback where appropriate. In addition, all TeleGuidance tactician inputs are recorded and logged should further review or audit be necessary.

Zoox has built in multiple layers of protection to make sure the TeleGuidance systems are secure and cannot be misused. For example, the ADS communicates over a private, isolated wireless network that only authorized Zoox devices can access. All data sent between the ADS and TeleGuidance is encrypted, and only pre-approved individuals can access the system through multi-factor authentication. Further, tacticians do not have access to any rider personal information and are held to strict protocols with respect to other sensitive or proprietary information (e.g., including that such information must not be taken out of the operations center or stored on personal devices). They are also subject to confidentiality obligations to assure privacy and security is maintained.

Finally, Zoox is in a unique position because it received the first demonstration exemption issued by the National Highway Traffic Safety Administration (NHTSA) to a domestic

manufacturer under 49 U.S.C. § 30114(a). We operate according to policies and standards established by that exemption. This includes express permission to use TeleGuidance in operation, along with training and reporting requirements. In addition, Zoox complies with all crash reporting requirements at the state and federal level (including under NHTSA's Third Amended Standing General Order) and, in the interest of transparency, we do not request confidential treatment of our narrative descriptions, which NHTSA makes available to the public. Thus, and to the extent applicable, these reports would include information if and whether TeleGuidance played any role in a reportable event.

Thank you for the opportunity to provide this response and to continue developing public trust as Zoox works to shape the future of transportation.

Sincerely,

Christopher Nalevanko

Christopher Nalevanko
General Counsel, Vice President, Secretary
Zoox