July 6, 2021

Ann Carlson, Chief Counsel
U.S. Department of Transportation
National Highway Traffic Safety Administration
1200 New Jersey Avenue SE
West Building Ground Floor, Room W12-140
Washington, DC 20590-0001

Re: Standing General Order 2021-01, Incident Reporting for Automated Driving Systems and Level 2 Advanced Driver Assistance Systems

Dear Ms. Carlson,

The Self-Driving Coalition for Safer Streets ("Self-Driving Coalition" or "Coalition") writes today to express certain concerns over the National Highway Traffic Safety Administration's ("NHTSA") Standing General Order ("Order") on "Incident Reporting for Automated Driving Systems (ADS) and Level 2 Advanced Driver Assistance Systems (ADAS)." The Coalition supports providing information to NHTSA about the safety of automated driving systems; however, we have both procedural and substantive concerns related to the Order. In order to allow time to modify the Order to address these concerns, we strongly urge NHTSA to delay the effective date of the Order. The Coalition is ready and eager to work with NHTSA to address our concerns and ensure that data reported to NHTSA is accurate, useful, and statistically significant.

Background on Coalition

The Self-Driving Coalition is comprised of the world's leading technology, ridesharing, trucking, and automotive companies dedicated to the safe and swift deployment of fully autonomous vehicles. Members include Argo AI, Aurora, Cruise, Embark, Ford, Kodiak, Lyft, Motional, Nuro, TuSimple, Uber, Volvo Cars, Waymo, and Zoox.[1] Our mission is to advance and promote the benefits of fully autonomous vehicles (*i.e.*, vehicles equipped with an automated driving system designed to function without a human driver as a level 4 or 5 system under SAE J3016) and support the safe and rapid deployment of these innovative and potentially life-saving technologies.

The Coalition shares NHTSA's goals of promoting vehicle safety and saving lives, and we encourage the safe and swift deployment of ADS-equipped vehicles to help achieve these goals. Additionally, we believe that clear, national reporting standards can be an important

[1] *See* https://www.selfdrivingcoalition.org/.

means to increase public understanding of ADS-equipped vehicles and support their deployment. As evidence of our commitment to transparency and support for increasing public understanding of ADS-equipped vehicles, each member previously committed to participate in NHTSA's AV TEST Initiative and has consistently collaborated with NHTSA on matters pertaining to ADS-equipped vehicles. Further, members voluntarily elect to publish safety assessments that contain detailed information meant to educate the public and the agency about the SAE Level 4 or 5 technology being tested or deployed. Our members also currently comply with significant, existing reporting requirements, such as those in states like California and Pennsylvania. As the agency is aware, manufacturers also comply with substantial data reporting obligations that require reports to NHTSA on a wide variety of information that could indicate the existence of a potential safety defect.[2]

Concerns with Order

The Coalition supports providing information about the safety of automated driving systems and believes it is important for NHTSA to have access to information that will allow it to achieve its statutory mandate of reducing "traffic accidents and deaths and injuries resulting from traffic accidents."[3] However, the Coalition has significant concerns that the limited process prior to publishing the Order and its content may generate flawed data reporting of questionable utility to the agency and requirements that disproportionately burden smaller developers relative to legacy corporations, which could unintentionally impede deployment of safety-enhancing ADS technology.

I. Process Concerns

The current implementation date of the Order provides little time for entities subject to the Order to develop mechanisms necessary to comply with the Order. We strongly urge the agency to reconsider its effective date, which could be as soon as July 12th for some companies. Member companies and other affected parties need a reasonable amount of time to understand all of the Order's details, develop appropriate compliance mechanisms (which may involve changes to internal procedures and systems), educate all employees and associated personnel who will be involved in related compliance activities, and ensure readiness for implementation. While entities may have robust processes already in place for identifying issues with their fleets, building programs for ensuring compliance with the novel reporting requirements in the Order is a significant undertaking. Notably, the Order provides just 12 calendar days between its issuance (June 29) and implementation date (July 12), a short span that includes two weekends and a national holiday, with many employees out of the office. Without time to address the issues

[2] *E.g.*, 49 U.S.C § 30166(m).
[3] 49 U.S.C. § 30101.

identified in this letter and provide further interpretive guidance, reporting entities may interpret requirements differently, leading to inconsistencies in the data and the potential for public confusion. Accordingly, we recommend that NHTSA amend the order to take effect no sooner than August 1, 2021.

Members of the Coalition had no opportunity to provide comments to the agency, having learned of its existence and 10-day effective date at the time of issuance. When the Coalition met with NHTSA officials on April 2nd, we expressed our commitment to working with the agency to promote public safety and transparency. We therefore are disappointed that NHTSA issued this Order without seeking industry input of any kind. In particular, NHTSA chose to impose these requirements under its investigative authority (49 U.S.C. § 30166(g)(l)(A) and 49 C.F.R. § 510.7) rather through traditional rulemaking procedures pursuant to the Administrative Procedure Act ("APA"). This undermines the core purposes underlying the APA—to obtain the public's input and ensure requirements are produced in a reasoned, deliberative process. The Coalition strongly supports the advancement of safety positive outcomes, and we believe it is critical that NHTSA seek stakeholder input by providing notice and an opportunity for public comment. Had NHTSA sought public input prior to the issuance of the Order, we would have embraced the opportunity to share the suggestions discussed in this letter and engage in a dialogue while these reporting requirements were in development.

II. Substantive Concerns

As explained below, the Coalition has identified significant concerns with the Order as it is currently written. We would appreciate and welcome the opportunity to collaborate with NHTSA to address these concerns, which we believe may impede NHTSA's intended goal of obtaining meaningful information that bears on vehicle safety.

A. The Order imposes more extensive obligations on ADS-equipped vehicles than on ADAS-equipped vehicles, without justification.

The Order does not sufficiently identify a basis for why ADS-equipped vehicles are subject to additional, more extensive and burdensome significant reporting obligations than apply to ADAS-equipped vehicles. Unlike ADAS-equipped vehicles that are widely operated by the public today, ADS-equipped vehicles are not available for sale to the public, and instead are operated and closely monitored fleets by ADS manufacturers and developers in testing and limited deployments. The safety record to date of ADS-equipped vehicles is very strong. At a minimum, any reporting that applies to ADS should also apply to ADAS. Alternatively, given the comprehensive nature of Request No. 1 in identifying higher severity crashes, we think that Request No. 2 could be deleted entirely from the Order without the agency losing any information that is important for achieving the stated purposes of the Order.

B. *NHTSA should provide context for data reported under the Order and should clarify that it will separate reported data related to ADAS from ADS-specific information.*

Even strictly within the ADS context, reporting entities subject to the Order operate a range of use cases for this technology, varying significantly in scale. Accurately assessing crash data of ADS-equipped vehicles requires proper contextualization, including an understanding of the number of miles driven and the operational design domain of the vehicles (e.g., road types, speeds, density, etc.), among other factors. The agency has stated its intention to make summaries of the reported crash data publicly available, and we are concerned that presentation merely of raw data without that context could cause significant misapprehension of the safety of any company's ADS. We encourage the agency to explain in the Order itself, and in future statements by NHTSA about the data collected, that the crash data provided pursuant to the Order is just one input into a broad and nuanced assessment of ADS safety and to stress the importance of viewing this data in the appropriate context.

In addition, the overwhelming proportion of crashes involving driving automation technologies involve ADAS, not ADS-equipped vehicles. Therefore, we believe it is critical that NHTSA ensure that reported information pertaining to ADAS-equipped vehicles is distinguished from information that pertains to ADS-equipped vehicles to avoid conflation of these distinct technologies and that any published summaries clearly make this distinction. ADS-equipped vehicles with ADS designed to function without a human driver at level 4 or 5 system under SAE J3016 are distinct from both vehicles with ADAS and from vehicles with lower levels of automation. Commingling information reported by all reporting entities could lead to significant public confusion. We recommend that NHTSA clarify how information reported by manufacturers and operators of ADS-equipped vehicles will be distinguished from other information provided under the Order.

C. *The Order's definition of a "crash" is vague and may lead to reported data that has limited to no bearing on safety.*

The Order's overly broad definition of "crash," included below, could lead to reporting of false information or information that provides no insight about ADS safety.

> [A]ny physical impact between a vehicle and another road user (vehicle, pedestrian, cyclist, etc.) or property that results ***or allegedly results*** in any property damage, injury, or fatality. For clarity, a subject vehicle is involved in a crash if it physically impacts another road user ***or if it contributes or is alleged to contribute (by steering, braking, acceleration, or other operational***

performance) to another vehicle's physical impact with another road user or property involved in that crash (emphasis added).

Under this definition, a crash includes the "allegation" of any of the above, regardless of the veracity or completeness of the allegation. Allegations often lack essential details, or may include no details at all. The date, time, location, circumstances, and even the subject vehicle can all be unknown. Multiple allegations may arise from the same subject incident. But under the Order, ADS manufacturers and operators must report each such allegation as a "crash," even, for example, when data available is very limited or non-existent or allegations are false or inconsistent. This permits bad data to intermix with good data and compromises the utility of the data set, which creates a significant challenge for the agency to identify credible data that supports further investigations.

This definition also covers instances when the subject vehicle has not physically made contact with another vehicle, property, or road user. As written, this could include events where the subject vehicle did not make contact with another road user or property, but where the subject vehicle "contributes or is alleged to contribute" to another vehicle's impact with another road user or property. The concept of "contribution" without physical impact and what qualifies as an "allegation" are vague and could be interpreted very differently by reporting entities, compromising the agency's ability to compare data across reporting entities. Further, including "contribution" and even more so, including merely "alleged" contribution, could also lead to reporting of information that is false, unsubstantiated, or otherwise unrelated to safety. This could lead to the reporting of inaccurate information and information that does not support—and potentially undermines—the agency's efforts to assess ADS safety.

To address these concerns, we recommend revising the definition of "crash" as follows:

"Crash" means any physical impact between a vehicle and another road user (vehicle, pedestrian, cyclist, etc.) or property that results or allegedly results in any property damage, injury, or fatality. ~~For clarity, a subject vehicle is involved in a crash if it physically impacts another road user, or if it contributes or is alleged to contribute (by steering, braking, acceleration, or other operational performance) to another vehicle's physical impact with another road user or property involved in that crash~~.

D. The Order's definition of "notice" is overbroad and may inadvertently cause well-intentioned operators and developers to submit false positives and duplicate reports.

The Order's definition of "notice" may also contribute to inaccurate data reporting. Notice is currently defined as:

> [I]nformation you have received from any internal or external source and in any form (whether electronic, written, verbal, or otherwise) about an incident that occurred ***or is alleged to have occurred***; including, but not limited to vehicle reports, test reports, crash reports, media reports, consumer or customer reports, claims, demands, and lawsuits. A manufacturer or operator has notice of a crash or a specified reporting criterion (i.e., a resulting hospital-treated injury, fatality, vehicle tow-away, air bag deployment, or the involvement of a vulnerable road user) when it has notice of facts or alleged facts sufficient to meet the definition of a crash or a specified reporting criterion, ***regardless of whether the manufacturer has verified those facts*** (emphasis added).

Like the definition of "crash," this definition also links reporting obligations to allegations, regardless of whether they are verified or can be verified. Again, allegations often lack significant details and may introduce errors into the data collected. Further, when coupled with the broad definition of "crash" (discussed above), the current "notice" definition could lead to overbroad reporting of information that is not safety-related, such as false allegations that a crash occurred. For example, this could include a vague, unattributed post on social media or a pedestrian yelling an allegation at an ADS-equipped vehicle operating without a representative of the reporting entity onboard. For clarity, in order to constitute "notice," we suggest requiring that all notice provided by sources external to the reporting entity (including from consumers or other members of the public) be submitted to the reporting entity electronically or in writing. Moreover, in today's media landscape, "media reports" are difficult to define and can vary widely in quality and validity, including many sources (*e.g.*, blogs, social media, etc.) that are not governed by journalistic ethics. Relying on information received through such sources poses a significant risk of false and duplicative reports. To reduce the risk of erroneous reports, the Coalition recommends that the definition of "notice" be revised as follows:

> [I]nformation you have received from any internal source in any form or from an external source submitted to the reporting entity ~~and~~ in written or electronic ~~any~~ form ~~(whether electronic, written, verbal, or otherwise)~~ about an incident that occurred ~~or is alleged to have occurred~~; including, but not limited to vehicle reports, test reports, crash reports, ~~media reports,~~ consumer or customer reports, claims, demands, and lawsuits. A manufacturer or operator has notice of a crash or a specified reporting criterion (i.e., a resulting hospital-treated injury, fatality, vehicle tow-away, air bag deployment, or the involvement of a vulnerable road user) when it has actual notice of facts ~~or alleged facts~~ sufficient to meet the definition of a crash or a specified reporting criterion~~, regardless of whether the manufacturer has verified those facts~~. Media reports, including blog and social media posts, do not constitute "notice."

E. The criteria for crashes subject to reporting under Request No. 1 should be revised so that the Request applies only to higher severity crashes and property damage thresholds should be added to Request No. 2.

We recognize that more severe crashes warrant more expeditious reporting, as is set forth by Request No. 1. However, we believe that the triggers for Request No. 1 as currently drafted could lead to expedited reporting of low severity crashes.

First, reporting under Request No. 1 could be triggered if a vulnerable road user "is alleged to have caused or contributed to the crash by influencing any part of the driving task for any vehicle involved in the crash." This could lead to expedited reporting of low severity crashes that involve no injury whatsoever, minimal property damage, or crashes where a party falsely claims a vulnerable road user influenced their behavior. In addition, this could lead to immediate reporting of other events that are not informative of ADS safety, for example, a crash where another vehicle swerves to avoid a vulnerable road user, then makes physical contact with a subject vehicle. We suggest removing this criterion from Request No. 1, so that reporting under Request No. 1 would still apply if a vulnerable road user is injured as a result of the crash; if a vulnerable road user is struck without injury by any vehicle involved in the crash; if a vehicle that a vulnerable road user is using or riding is damaged as a result of the crash; or if a vulnerable road user is involved in a crash that meets any other criteria for reporting under Request No. 1.

Second, we understand that the vehicle tow-away trigger is used in some regulations (*e.g.*, FMCSA's post-accident alcohol and drug testing rules in 49 C.F.R. § 382.303) as a likely indicator of more severe crashes. These requirements speak of "disabling damage" requiring that the vehicle be towed. In the case of ADS-equipped vehicles, however, manufacturers and operators often tow ADS-equipped vehicles from the scene of even minor collisions, such as where the vehicle is rear-ended at a low speed. Such vehicles are often not disabled and towing is not necessarily an indicator of the crash's severity. We accordingly suggest removing vehicle tow-away as a criterion for reporting under Request No. 1. Higher severity crashes that involve a vehicle tow-away will be captured by other criteria for reporting under Request No. 1 (*e.g.*, injury requiring transport from the scene to a hospital or airbag deployment).

In addition, with respect to Request No. 2, the absence of any minimum property damage threshold and the reference to an impact with any form of "property" may lead to reporting of extremely minor contacts that provide no information relevant to ADS safety under the request. This could lead to reporting of events involving very minor damage, such as a tire failure resulting in impact with a curb or damage to the vehicle caused by a pothole. Although Request No. 1 contains additional criteria that relate to crash severity as addressed above, the breadth of the "crash" definition and the reporting criteria under Request No 2 could lead to volumes of

reports that do not provide the agency with helpful information. For crashes reportable only under Request No. 2, we suggest adding a de minimis exclusion for crashes that result in no injuries and property damage valued at $1,000 or less. We specifically suggest that the Order be revised as follows:

> [Request 2] A. a subject vehicle equipped with ADS is involved in a crash resulting in one or more injuries or property damage of at least $1,000 on a publicly ~~accessible~~ road in the United States (including any of its territories).

F. The short timeline for reporting severe crashes exacerbates concerns about vague definitions and reporting criteria.

We understand the agency's desire to learn about severe crashes soon after they occur. Currently, Request No. 1 requires reporting of serious crash information about potentially more severe crashes within one day of receiving notice of the crash. However, exercising due diligence in determining the facts surrounding a crash takes time, and one calendar day could lead to reporting when available information is very limited. Even in the best circumstances, it is difficult to obtain all relevant information concerning a motor vehicle crash in a single day. The Order's single day deadline all but guarantees that avoidable errors will arise in reporting this information, particularly as the current definition of "notice" could lead to manufacturers and operators being forced to report erroneous, unsubstantiated allegations. However, we agree that notice of a fatality justifies quicker reporting of available information, even if the information is very limited. For non-fatal crashes involving the other criteria for reporting under Request No. 1, we suggest extending the initial reporting deadline to 10 days after receipt of notice of the crash. This would still provide the agency with timely information about crashes as they occur, and would also allow reporting entities to focus on collecting and analyzing information during the day of the crash. We believe that a 10-day reporting deadline will lead to greater accuracy and completeness, which far outweighs any benefit of receiving limited and incomplete information sooner.

G. The 30-second lookback period for reportable crashes will lead to reported data that does not pertain to the safety of the ADS.

One of the criteria for reporting under all three Requests is engagement of the ADS (or ADAS for Requests No. 1 and 3) at any point during the 30 seconds immediately preceding the commencement of the crash. We believe that looking back 30 seconds will lead to reporting of a significant number of events where the ADS played no part in the ensuing crash. For example, a driver could decide to disengage for lunch break and take the vehicle outside its operational design domain 29 seconds before being involved in a crash, and the crash would still need to be

reported. We instead suggest selecting a 10 second look back period. This duration is sufficient time to brake to a stop from highway speeds using moderate deceleration. Therefore, crashes that occur more than 10 seconds after disengagement reflect on the vehicle's actions after disengagement and do not reflect on the pre-disengage performance of the ADS.

H. Other Considerations.

In addition to significant concerns addressed above, the Coalition would welcome the opportunity to discuss the important considerations discussed below regarding (1) use of consistent, established terms in the Order; (2) the impact of the Order on confidential business information; (3) how data reported will be used by the agency; and (4) clarifying changes to the language in the Incident Report Form.

1. *The Order should replace the term "incident" with "crash" to provide consistency and clarity, should use the term "public road," rather than "publicly accessible road," and should clarify who bears the burden of reporting a crash or incident.*

The Order uses the terms "crash" and "incident," but the term "crash" is defined while "incident" is not. For clarity and consistency, we encourage the agency to use the term "crash" throughout the Order and to re-name the required reporting form "Crash Report." We also recommend changing the term "publicly accessible road" used in the Order to "public road," which is more well-defined and used in the Motor Vehicle Safety Act and state laws. The term "publicly accessible road" is novel and undefined, which could lead to inconsistent interpretations.

Finally, the Order as currently drafted could result in the agency receiving duplicative reports if both manufacturers and operators are required to report the same incident or crash. We recommend that NHTSA clarify which entity bears the reporting burden to avoid both duplicative reports and possible confusion regarding the number of reported crashes.

2. *The Order creates a presumption of disclosure that risks disclosure of confidential business information and threatens innovation.*

The Order creates a presumption of disclosure that risks the disclosure of confidential business information ("CBI"). The Order states that the reported crash information, with three exceptions, "does not include any potential CBI exempt from public disclosure." As its basis for this assertion, NHTSA provides that this information "is widely available to the public from law enforcement agencies and through motor vehicle crash databases maintained by NHTSA." However, as discussed previously, the definitions of "crash" and "notice" as currently drafted reach far beyond what would be included in law enforcement and NHTSA databases, and may

include confidential information likely to cause substantial harm to the reporting entity's competitive position. Outside of the three enumerated exceptions, NHTSA provides no mechanism to claim confidentiality of CBI, creating a substantial risk of CBI disclosure. In addition, if a report includes CBI concerning the three enumerated exceptions, the reporting entity must also separately submit the report to NHTSA's Office of Chief Counsel. Given NHTSA's presumption of disclosure and the volumes of reports that are likely to be filed due to the breadth of current definitions and reporting criteria, the Coalition is concerned that CBI marked as confidential may be inadvertently released, resulting in competitive harm and adverse effects on American innovation.

3. *Absent changes noted above, the amount of data likely to be reported may be overwhelming and it is not clear how data will be used.*

As currently drafted, the Order will result in NHTSA receiving large volumes of potentially irrelevant data without any indication of how the data will be used or even whether the agency has the resources and capacity to review and assess the data. As explained above, much of the information to be reported under the Order is unlikely to provide meaningful information bearing on ADS safety. We recommend that the agency provide greater transparency regarding the intended uses of data. This is especially true given that Incident Report Forms could include sensitive personal information, such as information about individuals involved in a crash within the narrative section, that would be added to the mix of raw data held by NHTSA.

4. *The Incident Report Form should be revised for clarity.*

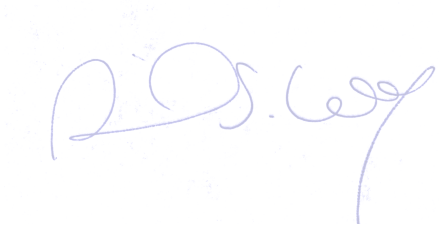
With respect to the Incident Report Form in the Order, instead of the phrase "Highest Severity Injury" in the Crash Description section of the Incident Report Form, we suggest the phrase "Highest Severity Injury Reported" to acknowledge that a reporting entity will not typically have direct knowledge of injuries or the extent of injuries. We also suggest adding a label to describe the box next to the "Subject Vehicle" box, which is presumably to provide information about another vehicle with which the Subject Vehicle made physical contact.

Finally, we suggest removing "Police Report" from the "Data Availability" list in the Incident Report Form. Law enforcement responds to many (but not all) crashes, and when law enforcement does respond, relatively few crashes lead to further investigation. When a law enforcement officer responds to a crash, a police report is typically filed, but is not available for review for some time. To prevent an additional filing solely because a police report becomes available after the filing deadline, we suggest removing "Police Report" from the "Data Availability" list, and instead include a separate checkbox to indicate whether law enforcement responded to the crash.

Conclusion

The Self-Driving Coalition shares NHTSA's commitment to safety and supports providing information about the safety of ADS-equipped vehicles. However, as discussed above, some aspects of the Order in its current form do not serve—and may undermine—NHTSA's efforts to collect meaningful data and study potential safety defects in ADS. In addition, without needed changes, the Order may have the unintended consequence of hindering the development, testing, and adoption of ADS technology. ADS has the great potential to improve public safety, enhance mobility for the elderly and disabled, reduce traffic congestion, improve environmental quality, and advance transportation efficiency. We strongly urge NHTSA to delay the effective date of the Order to allow time to work with stakeholders to modify the Order as recommended in this letter before the affected companies are required to comply. Thank you for your consideration, and we look forward to continuing to engage with the agency on these important issues.

Sincerely,



Ariel S. Wolf
General Counsel
Self-Driving Coalition for Safer Streets

cc: Dr. Steven Cliff, Acting Administrator, National Highway Traffic Safety Administration
Carlos Monje, Under Secretary for Transportation Policy, U.S. Department of Transportation