

TO: Majority and Minority Staff of Senate Commerce, Science, and Transportation Committee and House Energy and Commerce Committee

FROM: Advocates for Highway and Auto Safety, Consumer Federation of America, KidsAndCars.org, and Trauma Foundation

DATE: December 13, 2019

RE: Request for Input on Draft Autonomous Vehicle Legislative Language

Introduction

Thank you for the opportunity to provide feedback to three sections of potential autonomous vehicle (AV) legislation.

We would like to start by reiterating our safety priorities and policy positions that are also included in more detail in our November 6, 2019 memo. They remain relevant and essential in developing any legislation on AVs. In sum, they are:

- Our Nation's first law on AVs must allow for the successful development and deployment of AVs and advance a public safety agenda and not just an economic agenda.
- To accomplish the statutory safety mission of the U.S. Department of Transportation (DOT), the Department must establish a regulatory structure that sets minimum safety performance standards and requires industry accountability *before* driverless cars are available in the marketplace and sold to the public.
- The U.S. is not falling behind other nations in developing AVs and this argument should not be used to buttress swift enactment of legislation that disregards current safety standards and the essential need for future ones. In fact, auto and tech industry executives have stated that fully autonomous vehicles ready for commercial deployment are potentially decades away.
- Many public opinion polls reveal a high level of skepticism and apprehension because of safety concerns about AVs among all age groups, regions of the country and income levels.

Since our last submission, the National Transportation Safety Board (NTSB) held a Board Meeting on November 19, 2019, to determine the probable cause of a crash involving an Uber automated test vehicle in Tempe, Arizona. The test vehicle needlessly struck and killed a pedestrian. Among the key issues the NTSB identified was the glaring need for sensible safeguards, protocols and regulations issued by U.S. DOT for AVs which are not being sold but are being tested on public roads. Basic safeguards are urgently needed as the NTSB also emphasized that a dearth of safety culture at Uber contributed to this tragic outcome.

Some relevant and compelling quotes from the NTSB hearing endorsing the views of consumer and safety groups include:

[T]he lessons of this crash do not only apply to Uber ATG and they're not limited to just simply something went wrong and now it's fixed. Rather, it's something went wrong and something else might go wrong unless its prevented...[T]his

crash was not only about Uber ATG test drive in Arizona, this crash was about testing the development of automated driving systems on public roads. Its lessons should be studied by any company testing in any state. If your company tests automated driving systems on public roads, this crash, it was about you. If you use roads where automated driving systems are being tested, this crash, it was about you. And if your work touches on automated driving systems at the federal or state level, guess what, this crash, it was about you. NTSB Chairman Robert Sumwalt

NHTSA's mission is to save lives, first and foremost, to prevent injuries and to reduce economic costs due to road traffic crashes through education, research, safety standards, which we are lacking here, and enforcement activity but first and foremost it's to save lives.... In my opinion, they have put technology advancement here before saving lives. NTSB Board Member Jennifer Homendy

We urge Congress to acknowledge and account for critical information from our Nation's preeminent crash investigators and findings from all investigations¹ should be released *before* taking legislative action. This is essential to developing sound and safe public policies. The outcomes of these investigations will further identify safety deficiencies, determine contributing causes, and recommend government and industry actions to prevent future deadly incidents. As stated by NTSB Chairman Robert Sumwalt during the November 19, 2019 meeting, "[o]ur entire purpose for being here is to learn from tragic events like this so that they can be prevented in the future... This investigation has the ability to have far reaching implications down the road."

With regards to the process, we again refer to our previous memo which states:

- Our ability to properly assess and evaluate these three isolated provisions is hampered by the fact that we cannot review the bill in its entirety.
- Taken as distinct and individual sections, rather than components of a larger inter-related legislative package, we have provided initial feedback below and attached (please note that in the attached redlined draft legislative language, there may be additional recommendations not necessarily included in this memo). Without access to the totality of the potential AV legislation, we may change our analysis pending a review of the other sections.
- Our evaluation is limited only to these sections on their own, rather than in the context of the sections released in October, because we have no means of knowing the current status and text of those sections. Moreover, the process to date has not allowed for access to comments provided by other stakeholders to which we have objected on a number of occasions. An open and transparent process is fundamental to developing legislation that will have such a wide-ranging and critical impact on public health and safety. We urge the Committees to release all comments by stakeholders to ensure a fuller understanding of the position of the interested parties.
- By identifying deficiencies in each section, our organizations are not agreeing with, endorsing or assenting to the inclusion of such sections in a final AV bill. We vehemently oppose these three sections, or the combination of the latest sections

¹ NTSB Investigations HWY19FH008; HWY18FH011; and HWY18FH004.

provided and the first set of three sections, being used as the base or critical components of our Nation's first AV law.

Analysis of Three Draft Sections

Updated and New Motor Vehicle Safety Standards for Automated Vehicles (PAT19A73):

Issue: This section fails to ensure that the U.S. DOT promulgates federal safety standards in a timely manner to protect all road users. The NTSB report of the Arizona Uber crash states, “[a] promise of the upcoming ADSs [automated driving systems] is that such systems will be safer than a human driver. Until that promise is realized, the testing of a developmental ADS—with all its expected failures and limitations—requires appropriate safeguards when conducted on public roads.”

Legislation must include requirements for DOT to issue minimum safety performance standards by a date certain *before* AVs are in the marketplace. This is similar to other lifesaving and cost-beneficial laws enacted by Congress setting minimum requirements for technologies including airbags, tire pressure monitoring, rollover and ejection prevention and recently, rearview cameras. As the NTSB report notes, “[i]t’s time for NHTSA to live up to its stated goals and create appropriate safety regulation in this developmental area...It should work with the stakeholders to put safety first and technology advancement second.”

The “safety priority plan” included in the draft is not equivalent to a Congressional directive for the Secretary to issue federal safety standards through public rulemakings. And, a “safety self-assessment” is not a substitute for a manufacturer having to meet minimum safety performance requirements.

Moreover, the safety priority plan itself has several fatal flaws. For example, it only requires a “description” of overall priorities rather than details about the priorities themselves. The safety priority plan also lacks any clear structure or guidelines for carrying it out. Specifically, the directive regarding the “safety-related elements” states that the Secretary shall “address” but has no instruction for what actions are to be taken or procedures to be implemented by the Secretary. Additionally, the “safety-related elements” contain weak language that is completely inadequate to protect all road users. The language also allows the Secretary broad discretion to change the plan without public notice or comment. Further, a majority of the rulemaking language, which in and of itself is insufficient, remains in brackets, leading to uncertainty that it will be preserved.

The crashes involving the Boeing 737 MAX airplane tragically highlight the catastrophic results that can occur when automated technology potentially malfunctions and is not subject to thorough oversight. Reports indicate that many aspects of the plane’s certification were delegated to Boeing. In fact, the Federal Aviation Administration (FAA) never fully evaluated the flawed automated system. Had a thorough evaluation of this system been undertaken, its flaws may have been detected and corrected, preventing two needless tragedies and the loss of 346 innocent lives. In the case of NHTSA and AVs, the agency has failed to issue even minimum safety performance standards, let alone performed adequate oversight. It would be unconscionable to allow NHTSA to abdicate its responsibility to protect public safety and risk the lives of all road users.

In order to ensure swift issuance of essential safety regulations for AVs, NHTSA must be given dedicated funding to carry out the rulemakings under this section. The agency is chronically underfunded and NHTSA's Operations & Research budget is meager (only about \$350 million annually in the past two years) compared to the enormous and growing responsibilities of the agency, particularly with regard to AVs. This legislation must include at least \$200 million in authorizations annually for NHTSA to complete these vital rulemakings.

More detail regarding specific deficiencies is below and in the attached redline edits.

Problems Identified and Action Needed (See Attachment A):

- The Secretary's "safety priority plan," as well as actions needed and deadlines to complete each safety mandate and initiative, must include specific details of the AV priorities of NHTSA, not just a "description," and must apply to all levels of AVs (including partially-automated vehicles).
- The process by which motor vehicle safety standards in effect on the date of enactment may be updated to accommodate the development and deployment of AVs must be done through a public rulemaking.
- The language must require the Secretary to issue a final rule by a date certain for each element under the plan, rather than simply "address" each of the elements.
- Problems with specific elements:
 - **System Safety:** includes the "mitigation of unreasonable risks" but does not require that said risks be eliminated or minimized.
 - **Automation Function:** does not define "minimal-risk condition." Depending on how that is defined, it could allow AVs to continue to operate in a compromised state or outside of the operational design domain (ODD). It also does not require that AVs have manual override capabilities, whether within the vehicle or remotely operated, or that first responders have protocols for intervention if necessary.
 - **Human-Machine Interface:** only includes methods of "informing" a human driver or operator about whether an automated driving system is functioning properly, but does not ensure the system actually enables them to respond to protect both themselves and all road users. Human drivers, operators, and/or occupants must be given essential information regarding what to do, and critical time frames if appropriate, when a vehicle is not functioning properly. This section also fails to include Level 2 partially-autonomous vehicles, which will be subject to the same driver engagement problems as Level 3s.
 - **Crashworthiness:** road users deserve a higher level of protection than "practicable" and any alternate seating positions or configurations must undergo testing by NHTSA.
 - **Cybersecurity:** only includes mechanisms for "alerting" a human driver or operator regarding cybersecurity vulnerabilities. Language must also ensure that systems can detect and respond to any cybersecurity attacks, breaches and incursions and take the steps necessary to ensure safe continued operation, including the vehicle entering a failsafe mode.
 - **Capabilities:** in addition to a determination of the capabilities and limitations, verification of such is also necessary.

- **Post-Crash Behavior:** assurance is needed that any AV involved in a crash is deemed safe before it returns to operation.
 - **Applicable Laws:** clarity is needed for what entity defines “rules of the road.”
- Any modifications or changes to the priority plan made by the Secretary must be put in the Federal Register for public review and comment. Interim updates must also be readily accessible to the public and available in the Federal Register.
- It is unclear whether the rulemaking outlined in subsection (b) is for development of the plan itself or for the specific elements within the plan. Each element of the plan must have a clear directive to the Secretary to issue a final rule by a date certain.
- The safety assurance rulemaking under (b)(2) is unacceptable as written and must be changed to “Safety Performance Rulemakings.” The Secretary must be directed to issue final rules for each safety element under (a)(4) within two years of enactment of the bill.
- The evaluation and incorporation of UL 4600 must be stricken.
- The 2-year timeline for issuing a final rule for the submission of a safety self-assessment is needlessly long and must be changed to one year. Furthermore, the requirement in the interim for safety assessment letters to be submitted pursuant to the NHTSA guidance is completely objectionable. To date, the submissions voluntarily submitted by manufacturers more closely resemble glossy marketing brochures. The information and data needed for an objective and comprehensive analysis as to the safety performance of the subject vehicle or system must be complete and standardized.
 - NHTSA must review and evaluate all safety self-assessments submitted to assess whether an approach to automated driving system development and testing met the minimal intent of the safety areas. As the NTSB report on the Uber crash notes:

If the process of submission of safety self-assessment reports were mandatory and included evaluation and approval by NHTSA, it could serve as a criterion for judging whether a developer’s approach to ADS development and testing met the minimal intent of the 12 safety areas. NHTSA’s approval of a safety plan could also provide a minimum safeguard for the testing of developmental ADSs on public roads. Furthermore, assessment by NHTSA would provide important support to states when evaluating the appropriateness of a developer’s approach to the testing of automated vehicles.
- The agency must also be given the authority to direct manufacturers to cease and desist the sale and/or operation of vehicles that pose an imminent hazard to the public. Legislation to provide NHTSA with similar authority was introduced in the 114th Congress by Representatives Jan Schakowsky (D-IL) and Frank Pallone, Jr. (D-NJ) and Senators Bill Nelson (D-FL), Richard Blumenthal (D-CT) and Ed Markey (D-MA).
- The legislation should clarify that the agency has criminal penalty authority for false, fictitious or fraudulent submissions under 18 USC 1001.
- False or misleading submissions must be subject to civil penalties. An amendment offered by Senator Cory Booker (D-NJ) during the October 2017 Senate Commerce, Science, and Transportation Committee’s mark-up of the AV START Act (115th Congress, S. 1885) required such and was accepted.

- Moreover, depending on the guidance that is prevailing at the time, the requirements may not be sufficient to ascertain all relevant information.
 - Any updates to the rule should be subject to a public rulemaking process.
- The rulemaking on driver engagement should direct U.S. DOT to issue a final rule within two years for any vehicle that requires a human to take over the driving task at any point. Additionally, requiring the vehicle to “alert the driver when that engagement or awareness is lacking...” is not sufficient. The rule must also prescribe actions the system will take if the driver does not respond to such alerts.
- The rulemaking on data recording should direct U.S. DOT to issue a final rule within two years. The rulemaking must also require that all new vehicles be equipped with event data recorders, and that the data be collected in a way that is standardized and accessible. The Secretary should also be required to complete an evaluation of the benefits of real-time crash data transfer from an AV directly to NHTSA.
- The rulemaking on operating safeguards should direct U.S. DOT to issue a final rule within two years and should be applied to all vehicles with automated driving systems, not just partially automated vehicles.
- Updated safety standards must be subject to public rulemaking and comment.
- Any report to Congress under this section must be publicly accessible.
- Directed rulemakings to be completed by a date certain must also include:
 - **Cybersecurity Standard:** NHTSA must issue a minimum cybersecurity standard by a date certain to protect against potentially catastrophic hacks of AVs. There have been numerous high profile cyberattacks on a variety of industries and AVs will not be immune to this threat.
 - **Electronics Safety Standard:** AVs must be subject to minimum performance requirements for the vehicle electronics that power and operate safety and autonomous driving systems. Electronic glitches are commonplace and relatively harmless in instances of computer or cell phone crashes. However, if an AV fails to operate properly on public roads, the outcomes could be catastrophic and result in mass casualties.
 - **“Vision Test” for AVs:** AVs must be subject to a “vision test” to guarantee they will properly detect and respond to all other vehicles, pedestrians, bicyclists, children, wheelchair users, roadway infrastructure, interactions with law enforcement and first responders, animals, and other objects in the operating environment. A failure to properly detect and react to any of these road users or conditions could have tragic results, as demonstrated by the aforementioned March 2018 crash in Tempe, AZ that killed a woman walking a bicycle.
 - **Standard for Over-the-Air Updates:** It is anticipated that updates will be made to AV systems over the air that may change the functionality, capabilities and operational design domain (ODD) of the vehicle. An over-the-air standard must provide that consumers be given timely and appropriate information on the details of the update and ensure any needed training or tutorials are provided. Safety upgrades should be mandatory and not force the consumer to incur additional expenses. Also, during the update process cybersecurity must be maintained.
 - **Manual Override:** Occupants of a driverless car need the ability to assume control or shut the system down and get to a safe location in the event of a failure. A standard should be established to ensure the capability for a human to assume

control of AV when it malfunctions or travels outside the ODD. The manual override must be accessible to all occupants, including people with cross-disabilities and other vulnerable populations.

- **Functional Safety Standard:** Functional safety is a process by which a product is designed, developed, manufactured and deployed to ensure that the product as a whole will function safely and as intended. Basically, a functional safety standard assures consumers that a vehicle will do what a manufacturer states it does, and does it safely, and that it does not operate outside of conditions under which it can operate safely. Legislation should direct NHTSA to establish a functional safety standard that requires a manufacturer to certify to the agency that an AV has been tested to ensure it will operate reliably and safely under the conditions the vehicle is designed to encounter. Additionally, NHTSA should confirm the manufacturer's certifications are accurate by conducting their own testing as needed.
- The legislation must also provide NHTSA with additional legal authorities including imminent hazard and criminal penalties, as well as remove the cap on civil penalties.

Definitions (PAT19974):

Issue: It is a fool's errand to attempt to provide proper comment on a definition section when we don't have the entirety of the bill or know the status of sections for which we have provided comments. Further, the definitions may be problematic in how they are used in yet unforeseen sections.

Problems Identified and Action Needed (See Attachment B):

- SAE Level 3 vehicles are not included in the definition of a partially-automated vehicle or a highly-automated vehicle and seem to be omitted from the section.
- Any revision or incorporation of definitions into regulation should not be barred from a requirement for public notice and comment.

Relationship to Other Law (PAT19A78):

Issue: The statutory mission of the U.S. DOT established by Congress in 1966 (P.L. 89-563) is to regulate the performance of motor vehicles to ensure public safety, which now includes automated driving system technology and driverless cars. For more than 50 years, the U.S. DOT, through the NHTSA, has issued safety performance standards for passenger and commercial motor vehicles. The role of states is to regulate road safety by the passage of traffic safety laws. However, in the absence of comprehensive and strong minimum federal standards and regulations, the states retain a legal right and a duty to its citizens to develop proposals and implement solutions to ensure public safety. Legislation should not attempt to prohibit states, in any way, from advancing AV safety in the absence of federal rules. In fact, during the November 19 NTSB hearing, Board Member Homendy said, "[i]f you have a void at the federal level, the states are going to need to fill that because they have to ensure the safety of their citizens." It is confounding that the staff draft text attempts to completely disregard established law and flip the concept of preemption on its head by taking an unprecedented approach to limiting the rights of state and local governments to protect their citizens.

Problems Identified and Action Needed (See Attachment C):

- The language preempting the rights of state and local governments to protect their citizens is unacceptable and must be stricken.
- The term “performance” as it relates to preemption remains a major problem because it is undefined and could be interpreted to also include elements such as compliance with traffic laws or rules.

Conclusion

Thank you again for the opportunity to provide comments to the draft legislative language. It is vital that Congress adequately address the broad range of impacts on safety, mobility and infrastructure rather than rush enactment of a flawed bill that jeopardizes public safety and consumer confidence. In furtherance of that goal, we refer back to our November 6, 2019 submission which included proposed legislative language on necessary rulemakings, some of which are outside the scope of the current three sections, yet must be an essential component of any AV legislation. We are glad to answer any questions or provide any additional information as needed.

1 **SEC. ■■■. UPDATED AND NEW MOTOR VEHICLE SAFETY**

2 **STANDARDS FOR AUTOMATED VEHICLES.**

3 (a) IN GENERAL.—Subchapter II of chapter 301 of
4 title 49, United States Code, is amended by adding at the
5 end the following:

6 **“§30129. Updated and new motor vehicle safety**
7 **standards for automated vehicles**

8 “(a) SAFETY PRIORITY PLAN.—

9 “(1) IN GENERAL.—Not later than 180 days
10 after the date of enactment of this section, the Sec-
11 retary shall make available to the public and submit
12 to the Committee on Commerce, Science, and Trans-
13 portation of the Senate and the Committee on En-
14 ergy and Commerce of the House of Representatives
15 a safety priority plan for ~~highly~~ automated vehicles.

16 “(2) INCLUSION OF PRIORITIES.—The plan
17 under paragraph (1) shall include a detailed enumeration with
specific descriptions~~list description~~ of
18 the overall priorities of the National Highway Traf-
19 fic Safety Administration during the 10-year period
20 beginning on the date of issuance of the plan, in-
21 cluding motor vehicle safety standards or other regu-
22 lations required—

23 “(A) a public rulemaking to update the
motor vehicle safety

24 standards in effect on the date of enactment of

Commented [Advocates1]: By identifying deficiencies in each section, we are not agreeing with, endorsing or assenting to the inclusion of such sections in a final AV bill. Please see memo for our complete response on this section.

1 this section as necessary to accommodate the
2 development and deployment of ~~highly~~ auto-
3 mated vehicles;

4 “(B) to achieve compliance with subsection
5 (b);

6 “(C) to address each safety-related element
7 described in paragraph (4); and

8 “(D) to complete other safety initiatives of
9 the National Highway Traffic Safety Adminis-
10 tration.

11 “(3) REQUIREMENTS.—The plan under para-
12 graph (1) shall include—

13 “(A) a ~~detailed list~~ ~~description~~ of the actions needed
14 to

15 complete each safety mandate and initiative;

16 “(B) the priority of each such action; and

17 “(C) relevant milestones, including the an-
18 ticipated start date of an action, the completion
19 date of an action, and the effective date of each
20 safety mandate and initiative.

21 “(4) SAFETY-RELATED ELEMENTS.—In devel-
22 oping the plan required under paragraph (1), the

23 Secretary shall issue an applicable federal motor
vehicle safety standard for ~~address~~ each of the
24 following safety-

25 related elements, ~~as necessary~~ to ~~ensure~~ ~~accommodate~~ the
safe introduction of ~~highly~~ automated vehicles into
interstate commerce:

1 “(A) SYSTEM SAFETY.—The avoidance of
2 unreasonable risks to safety, including—

3 “(i) safeguards to ensure that sys-
4 tems, including hardware, software, elec-
5 trical, and electronic systems, perform in-
6 tended functions; and

7 “(ii) the mitigation-minimization and
8 elimination of ~~unreasonable~~
9 risks to safety caused by malfunction of an
10 automated driving system, including any
11 component of such a system.

12 “(B) AUTOMATION FUNCTION.—Elements
13 relating to the function of automation, includ-
14 ing the following:

15 “(i) The operational design domain in
16 which the ~~highly~~-automated vehicle is capa-
17 ble of safely operating, including, but not limited
18 to—

19 “(I) the type of roadway, geo-
20 graphical area, speed range, and envi-
21 ronmental and temporal conditions in
22 which the automated driving system is
23 capable of operating;

24 “(II) any roadway or infrastruc-
25 ture asset required for the operation
of the ~~highly~~-automated vehicle or
automated driving system, such as

4

1 roadside equipment, pavement mark-
2 ings, signage, and traffic signals; and

3 “(III) the means by which the
4 ~~highly~~ automated vehicle or auto-
5 mated driving system will respond if
6 the defined operational design domain
7 unexpectedly changes.

8 “(ii) The ability of the ~~highly~~ auto-
9 mated vehicle or automated driving system
10 to detect and safely transition to a minimal-
risk

11 condition, to be defined by the Secretary, when a malfunc-
tion is encoun-

12 tered, when operating in a degraded state,
13 or when operating outside of the oper-
14 ational design domain, including consider-
15 ation of the potential safety risks associ-
16 ated with a particular fallback strategy,
17 such as whether the strategy requires—

18 “(I) a human driver or remote operator;

19 “(II) an automated system with
20 or without driver controls; or

21 “(III) manual override capabili-

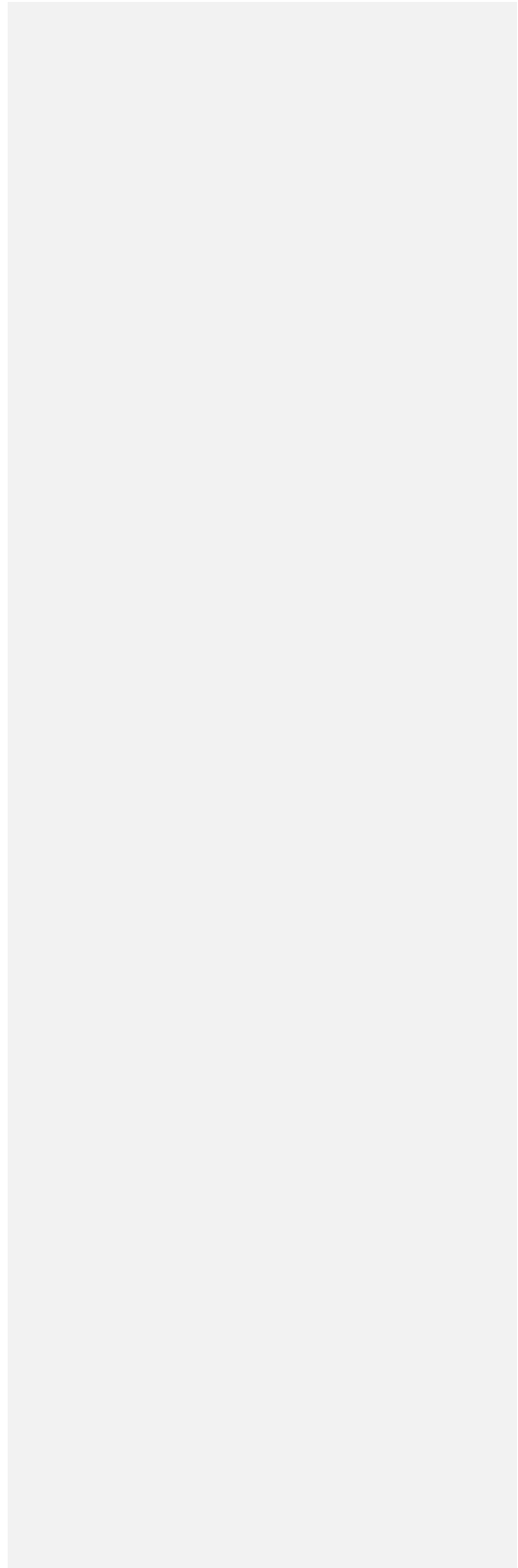
22 Ties; or-

“(IV) protocols for first responders for
intervention if necessary.

23 “(iii) Precrash scenarios, including but
not limited to

24 control loss, crossing-path crashes, lane

2425 change, head-on and opposite-direction



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1 travel, and rear-end, road departure, and
2 low-speed situations.

3 “(iv) The performance of the highly
4 automated vehicle through the development
5 and implementation of tests, including sim-
6 ulation, test track, and onroad testing.

7 “(C) OBJECT AND EVENT DETECTION AND
8 RESPONSE.—Elements relating to detection and
9 response, including—

10 “(i) object and event detection and re-
11 sponse capabilities of the highly-automated
12 driving system, including but not limited to—

13 “(I) behavioral competencies; and

14 “(II) crash avoidance capability;
15 and

16 “(ii) detection, correct classification, and re-
17 sponse to any circumstance or condition
18 relevant to the dynamic driving task within
19 the operational design domain, including but not
limited to

20 objects, motorcyclists, bicyclists, pedes-
21 trians, children, individuals with disabil-
22 ities, emergency response personnel, other
23 road users, roadway signs, highway mark-
24 ers, and traffic signals, ~~and~~ animals and weather
or temperature related events.

1 “(D) HUMAN-MACHINE INTERFACE.—Ele-
2 ments relating to human-machine interface, in-
3 cluding—
4 “(i) methods of informing a human
5 driver or operator regarding whether an
6 automated driving system is functioning
7 properly and actions, if necessary, to safety operate
8 the vehicle;
9 “(ii) for an highly automated vehicle
10 that requires a human operator to assume the
11 driving task at any point ~~classified as Level 3~~, the
12 methods to ad-
13 dress driver reengagement, which shall at a
14 minimum ~~may~~ in-
15 clude driver engagement monitoring to as-
16 sess driver awareness and readiness to per-
17 form the full driving task; and
18 “(iii) the use of a human-machine
19 interface by individuals with disabilities
20 through visual, auditory, or haptic dis-
21 plays, or other methods.
22 “(E) ~~C~~_{RASHWORTHINESS}.— The maintenance of
23 sufficient ~~Practicable~~
 protection for all occupants that is at a minimum ~~are~~
 currently provided in traditional seating configurations
 ~~for given~~ any new planned
 seating positions or interior configurations and,
 for an unoccupied highly automated vehicle,
 consideration of crash compatibility with other
 motor vehicles and road users.

1 “(F) C_{YBERSECURITY}.—The minimization
2 of cybersecurity risks to safety, including
3 through—

4 “(i) the evaluation of elements of the
5 supply chain to identify and address cyber-
6 security vulnerabilities;

7 “(ii) the exchange of information re-
8 garding any vulnerabilities discovered from
9 field incidents, internal testing, or external
10 security research; ~~and~~

11 “(iii) mechanisms for alerting a fleet
12 owner,
13 human driver or operator, the National Highway
Traffic Safety Administration and other relevant
federal agencies and local authorities as appropriate
regarding cyber-

security vulnerabilities; and,

“(iv) the safeguards to ensure systems can detect
and respond to any cybersecurity attacks, breaches
and incursions, to ~~and~~ take the steps necessary to
provide instructions which can be executed by all
occupants and to ensure safe continued operation,
including the vehicle entering a failsafe mode.

1

2 “(G) C_{APABILITIES}.—Determination and means of
verification of the

3 capabilities and limitations of an automated

4 driving system, including each automated driv-

5 ing system technology and associated functions. This
information must be made publicly available.

6 “(H) P_{OST-CRASH BEHAVIOR}.—The post-

9

7 crash behavior of the ~~highly~~ automated vehicle
8 or automated driving system if sensors or crit-
9 ical systems are damaged in a crash and means by
which the vehicle will be deemed safe to return to
operation.

10 “(I) APPLICABLE LAWS.—Within the oper-
11 ational design domain, the manner in which the
12 automated driving system is designed to comply
13 with—

1 “(i) applicable traffic laws; and

2 “(ii) rules of the road.

3 “(5) PERIODIC UPDATING.—The Secretary shall
4 update the plan under paragraph (1)—

5 “(A) not less frequently than once every 2
6 years; or

7 “(B) more frequently, as the Secretary de-
8 termines to be necessary.

89 (C) Any updates shall be made publicly available.

910 “(6) CHANGE IN PRIORITIES.—

1011 “(A) IN GENERAL.—The Secretary may

1112 modify the priorities described in the plan

1213 under paragraph (1) at any time to address

1314 matters the Secretary considers to be of greater

1415 priority. Any changes or modifications in priorities shall
be subject to public review and comment.

1516 “(B) ACTION BY SECRETARY.—In any case

1617 in which the Secretary determines that the plan

1718 under paragraph (1) requires updating, the

1819 Secretary shall—

1920 “(i) prepare an interim update of the

2021 plan; and

2122 “(ii) submit the updated plan to—

2223 “(I) the Committee on Com-

2324 merce, Science, and Transportation of

2425 the Senate; and

11

1 “(II) the Committee on Energy
2 and Commerce of the House of Rep-
3 resentatives.

- “(III) the plan shall be made available to the public

34 “(b) RULEMAKING.—

45 “(1) IN GENERAL.—Not later than 1 year after
56 the date of enactment of this section, the Secretary
67 shall ~~issue initiate~~ a final rulemaking to carry out subsection

8 (a).

9 ~~“(2) SAFETY PERFORMANCE ASSURANCE~~
RULEMAKINGS.—Not

10 later than ~~2~~10 years after the date of enactment

11 of this section, the Secretary shall ~~promulgate a~~
12 ~~safety assurance rule for manufacturers; to objec-~~
13 ~~tively and transparently assess and validate the safe-~~
14 ~~ty of the design, construction, and performance of a~~
15 ~~partially or~~

16 ~~highly automated vehicle or automated driving sys-~~

17 ~~tem by issuing~~ motor vehicle safety standards or

18 ~~other regulations, as necessary, to address each safe-~~

19 ~~ty-related element described in subsection (a)(4).~~

20 ~~“(3) EVALUATION OF STANDARD.—The Sec-~~
21 ~~retary shall~~

22 ~~“(A) evaluate the standard of United~~

23 ~~Laboratories entitled ‘Standard for Safety for~~

24 ~~the Evaluation of Autonomous Products’ and~~

25 ~~numbered UL 4600; and~~

1 ~~incorporate elements of that stand-~~
2 ~~ard into motor vehicle safety standards or other~~
3 ~~regulations promulgated pursuant to paragraph~~
4 ~~(2), as the Secretary determines to be nec-~~
5 ~~essary.;~~

61 ~~“(4) SAFETY SELF-ASSESSMENT.—~~

72 ~~“(A) IN GENERAL.—Not later than 12 years~~
83 ~~after the date of enactment of this section, the~~
94 ~~Secretary shall issue a final rule requiring the~~
105 ~~submission of a safety assessment certification~~
116 ~~by each manufacturer introducing highly auto-~~
127 ~~mated vehicles or automated driving systems~~
138 ~~into interstate commerce until the date on~~
149 ~~which the rule under paragraph (2) is promul-~~
1510 ~~gated.~~

1611 ~~“(B) INCLUSIONS.—The rule under sub-~~
1712 ~~paragraph (A) shall include—~~

1813 ~~“(i) a specification of each manufac-~~
1914 ~~turer required to submit certifications;~~

2015 ~~“(ii) a clear description of a requirement~~
21 ~~for the submission of the relevant~~

2216 ~~test results, data, and other contents re-~~
2317 ~~quired to be submitted in a standardized format by~~
2418 ~~each manufac-~~

2519 ~~turer in order to validate demonstrate that the~~
2620 ~~highly automated vehicles or automated~~

1 _____ driving systems of the manufacturer- will are
21 _____ likely—

32 _____ “(I) ~~to~~ maintain safety;

43 _____ “(II) ~~to~~ function as intended; and

54 _____ “(III) ~~to~~ contain fail-safe fea-
65 _____ tures; and

76 _____ “(iii) a specification of the cir-
87 _____ cumstances under which certifications are

98 _____ required to be updated or resubmitted, including a
requirement that these should be publicly
accessible.

109 _____ “(C) INTERIM REQUIREMENT.—During the

110 _____ period beginning on the date of enactment of

121 _____ this section and ending on the date on which

132 _____ the final rule issued pursuant to subparagraph

143 _____ (A) takes effect, safety assessment letters and supporting
documentation shall

154 _____ be submitted to the National Highway Traffic

16 _____ Safety Administration and cover each area, at a
minimum, outlined in theas—~~contemplated~~—by

17 _____ ~~the most recent relevant~~ guidance, ~~or any suc-~~

1815 _____ ~~cessor~~ guidance issued in September 2016 with respect
to ~~highly~~

1916 _____ automated vehicles requiring a safety assess-

2017 _____ ment letter. Letters submitted must be made publicly
available within 30 days.

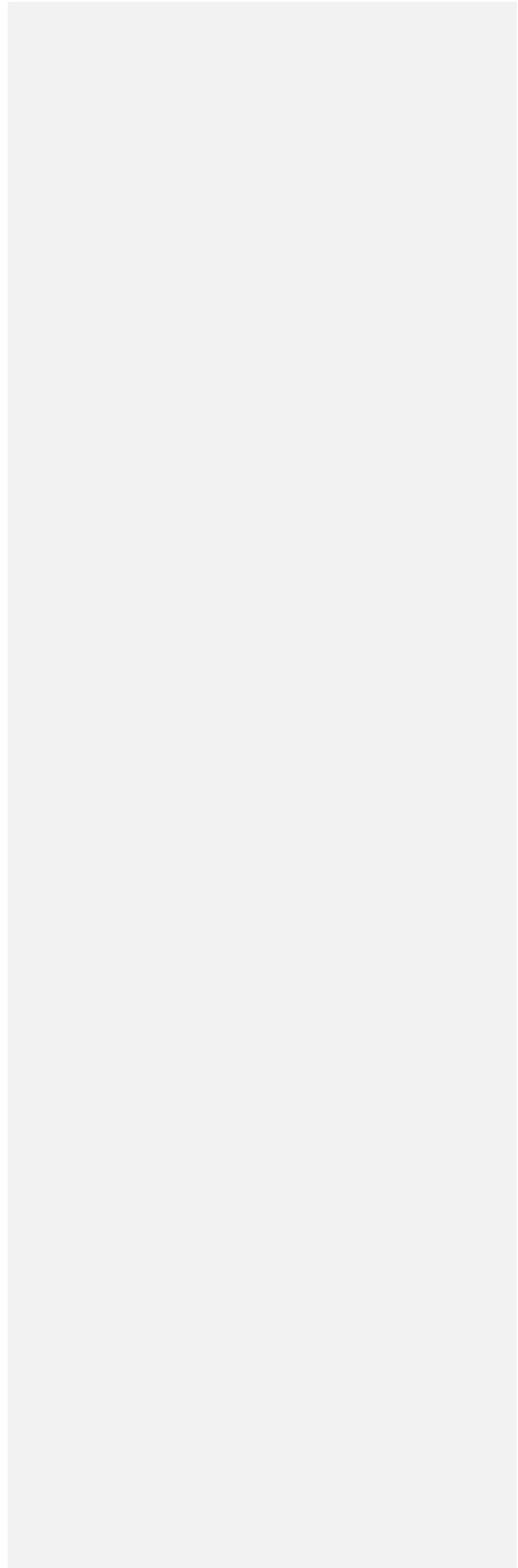
21 _____ —“(D) PERIODIC REVIEW AND UPDATING.—

22 _____ Not later than 5 years after the date on which

23 _____ the final rule is issued under subparagraph (A),

24 _____ and not less frequently than once every 5 years

~~25~~ ~~thereafter, the Secretary shall~~



1 ~~“(i) review the rule; and~~
2 ~~“(ii) update the rule, as the Secretary~~
~~• determines to be necessary.~~

31 ~~“(E) RULES OF CONSTRUCTION.—~~
42 ~~“(i) IN GENERAL.—Nothing in this~~
53 ~~section limits or affects the authority of~~
64 ~~the Secretary under any other provision of~~
75 ~~law.~~

86 ~~“(ii) No CONDITIONS ON~~
~~DEPLOY-~~
97 ~~MENT.—~~

108 ~~“(I) IN GENERAL.—The Sec-~~
9 ~~retary shall review the safety~~
~~assessment certification to assess~~
~~whether a developer’s approach to~~
~~ADS development and testing met~~
~~the minimal intent of the safety~~
~~areas of the safety self assessment.~~

11 ~~(II) FALSE OR MISLEADING~~
~~STATEMENTS —The information in~~
~~safety assessment certification shall~~
~~be subject to civil penalties for false~~
~~or misleading information pursuant~~
~~to Section 30165(a)(4) of title 49,~~
~~United States Code, and criminal~~
~~penalties pursuant to 18 USC~~
~~1001, may not condition the introduc-~~

10 ~~(III) ADDITIONAL AUTHORITIES —~~
~~The safety assessment certification~~
~~shall be subject to the new~~
~~authorities provided to the Secretary~~
~~under this Act.~~

12 ~~tion of highly automated vehicles or~~
13 ~~automated driving systems into com-~~

~~14 _____ merce on a review of a safety assess-~~
~~1511 _____ ment certification.~~

~~1612 _____ “(IV) EFFECT.—~~Nothing in this
~~1713 _____~~ clause precludes the Secretary from
~~1814 _____~~ using information contained in a cer-
~~1915 _____~~ tification under this subsection for
~~2016 _____~~ any other purpose.

~~17 _____ “(iii) NEW AUTHORITIES.—~~

~~18 _____ (A) IMMINENT HAZARD AUTHORITY~~

~~19 _____ Section 30118 of title 49, United States Code,~~
~~_____ is amended—~~

~~20 _____ (i) in subsection (b)—~~

~~21 _____ (A) in paragraph (1), by striking “(1) The~~
~~_____ Secretary may” and inserting “(1) IN~~
~~_____ GENERAL.—Except as provided under~~
~~_____ paragraph (3), the Secretary may”;~~

~~22 _____ (B) in paragraph (2), by inserting~~
~~_____ “ORDERS.—” before “If the Secretary”; and~~

~~23 _____ (C) by adding after paragraph (2) the~~
~~_____ following:~~

~~24 _____ “(3) IMMINENT HAZARDS.—~~

~~25 _____ “(A) DETERMINATIONS AND ORDERS.—~~
~~_____ If the Secretary determines that a defect or~~
~~_____ noncompliance, or combination of both, under~~
~~_____ subsection (a) presents an imminent hazard,~~
~~_____ the Secretary—~~

~~26 _____ “(i) shall notify the manufacturer of the motor~~
~~_____ vehicle or replacement equipment immediately~~
~~_____ under subsection (a);~~

~~27 _____ “(ii) shall order the manufacturer of the motor~~
~~_____ vehicle or replacement equipment to~~
~~_____ immediately—~~

~~28 _____ “(I) give notification under section 30119 of~~

this title to the owners, purchasers, and dealers of the vehicle or equipment of the imminent hazard; and

29 “(II) remedy the defect or noncompliance under section 30120 of this title;

30 “(iii) notwithstanding section 30119 or 30120, may order the time for notification, means of providing notification, earliest remedy date, and time the owner or purchaser has to present the motor vehicle or equipment, including a tire, for remedy; and

31 “(iv) may include in an order under this subparagraph any other terms or conditions, including to cease and desist, that the Secretary determines necessary to abate the imminent hazard.

32 “(B) OPPORTUNITY FOR ADMINISTRATIVE REVIEW.—Subsequent to the issuance of an order under subparagraph (A), opportunity for administrative review shall be provided in accordance with section 554 of title 5, except that such review shall occur not later than 10 days after issuance of such order.

33 “(C) DEFINITION OF IMMINENT HAZARD.—In this paragraph, the term ‘imminent hazard’ means any condition which substantially increases the likelihood of serious injury or death if not remedied immediately.”; and

34 (ii) in subsection (c), by inserting “or electronic mail” after “certified mail”.

35 _____

36 (B) CRIMINAL PENALTIES

37 _____

38 (1) A person who knowingly introduces into interstate commerce a motor vehicle or motor vehicle equipment that contains a defect that

18

causes death or serious bodily injury to an individual (as defined in section 1365(g)(3) of title 18), shall be subject to criminal penalties of a fine under title 18, or imprisoned for not more than 15 years, or both,

39

40 The Attorney General may bring an action, or initiate grand jury proceedings, for a violation of this subsection only at the request of the Secretary of Transportation.

41

42 (C) CIVIL PENALTIES

43

44 (1) Section 30165(a) of title 49, United States Code, is amended—

45 (a) in paragraph (1)—

46 (i) in the first sentence by striking “of not more than \$21,000 for each violation” and

47 (ii) by striking the third sentence; and

48 (b) in paragraph (3)—

49 (i) by striking the second and third sentence .

50

21 ~~Noth-~~

22 ~~ing in this section provides to the Sec-~~

23 ~~retary any new authority, except with re-~~

~~24 _____ spect to the promulgation of rules pursu-~~
~~25 _____ ant to this section.~~

~~26~~51 _____ “(iv) DISCOVERY.—Nothing in this
 1 section affects discovery, a subpoena or
 2 any other court order, or any other judicial
 3 process otherwise in accordance with appli-
 4 cable Federal or State law.

~~5 _____~~ ~~ø“(5) DRIVER ENGAGEMENT.—Not later than~~
~~6 ø—■—; 2~~ years after the date of enactment of this
 7 section, the Secretary shall require manufacturers to
~~8 _____~~ install systems in ~~partially automated vehicles and~~
~~98 _____~~ ~~highly automated vehicles classified as Level 3~~ automated
vehicles classified as Level 2 or 3—;

~~109 _____~~ ø“(A) to sense, as applicable—;

~~110 _____~~ ø“(i) the level of engagement of each
~~121 _____~~ driver in a partially automated vehicle; or;

~~1312 _____~~ ø“(ii) the awareness of a driver in a
 14 highly automated vehicle ~~classified as Level~~
~~1513 _____~~ ~~3~~; and;

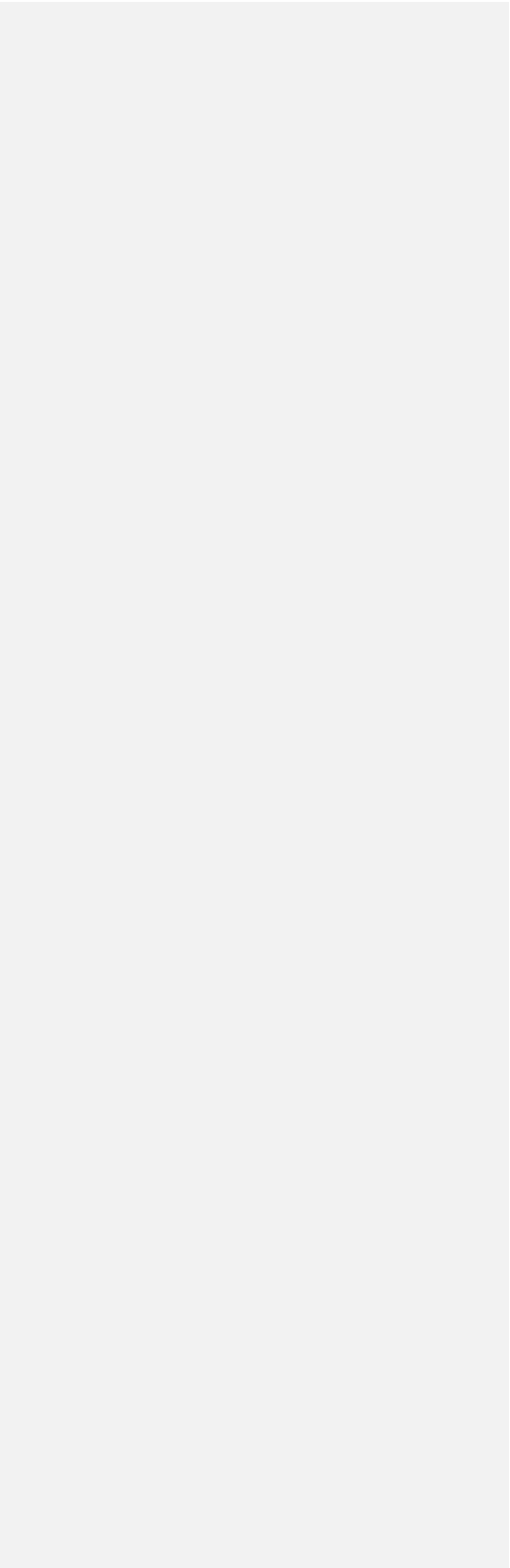
~~1614 _____~~ ø“(B) to alert the driver and other vehicle
occupants when that en-

~~1715 _____~~ gagement or awareness is lacking while the par-
~~1816 _____~~ tial driving automation or automated driving
 17 system is engaged—;

- “(C) to initiate a fail safe mode if the driver fails to
respond to the alert as well as execute the
designated procedures to assume operation of
the vehicle within a specified time frame.

~~1918 _____~~ ø“(6) DATA RECORDING.—;

2019 ~~“(A)~~ IN GENERAL.—Not later than
~~“(A)~~ 2 years after the date of enactment of



1 this section, the Secretary shall require all new
2 vehicles to be equipped with an event data
3 recorder as defined in ~~update~~ part
4 ~~_____~~ 563 of title 49, Code of Federal Regulations, ~~as~~
5 ~~_____~~ ~~the Secretary determines to be necessary and~~ to re-
6 ~~_____~~ vise the data elements to account for partial
7 ~~_____~~ driving automation and automated driving sys-
8 ~~_____~~ tems, including the control status of a vehicle
9 ~~_____~~ during a crash. The rule shall also specify a standard
10 format for all such data and that such data must be
11 anonymized, easily understood and accessible to law
12 enforcement, safety investigators including the
13 National Transportation Safety Board, the National
14 Highway Traffic Safety Administration and the
15 public.
16 ~~_____~~ ~~ç~~
17 ~~_____~~ ~~ç~~ (B) PRIORITY.—Notwithstanding any
18 other provision of law, the Secretary shall
19 prioritize the update under subparagraph (A) to
20 gather data necessary to promulgate the rule
21 ~~_____~~ pursuant to paragraph (2); ~~ç~~
22 ~~_____~~ (C) EVALUATION – Not later than 1 year after the
23 ~~_____~~ date of enactment of this section the Secretary shall
24 ~~_____~~ issue a report to Congress evaluating the benefits of
25 ~~_____~~ real-time crash data transfer from a vehicle to
26 ~~_____~~ National Highway Traffic Safety Administration.
27 ~~_____~~ ~~ç~~ (7) OPERATING SAFEGUARDS.—Not later
28 ~~_____~~ than ~~2 ç ç~~ years after the date of enactment of
29 ~~_____~~ this section, the Secretary shall issue a motor vehicle
30 ~~_____~~ safety standard requiring each partially and highly
31 ~~_____~~ automated
32 ~~_____~~ vehicle to incorporate system safeguards that limit

1819 the use of the partial driving automation to the
1920 operational design domain for which the partial driv-
2021 ing automation was designed.
2122 ~~“(8) UPDATING SAFETY STANDARDS.—~~
2223 ~~“(A) IN GENERAL.—Not later than 3~~
2324 years after the date of enactment of this sec-
2425 tion, the Secretary shall finalize regulations to
2526 update, as necessary, existing Federal motor ve-

1 hicle safety standards, testing procedures, and
2 methods for determining compliance with safety
3 standards for dedicated highly automated vehi-
4 cles or highly automated vehicles when the
5 automated driving system is performing the en-
6 tirety of the dynamic driving task.

7 ~~“(B) CONDITIONS.—~~In carrying out sub-
8 paragraph (A), the Secretary—

9 ~~“(i) shall ensure that all require-~~
10 ~~ments remain objective and practicable;~~
11 ~~and;~~

12 ~~“(ii) shall not modify the purpose~~ ~~or~~
13 ~~intent~~ or safety need of any Federal motor
14 ~~standard.~~

15 ~~“(c) REPORT TO CONGRESS.—~~Not later than 5 years
16 after the date of enactment of this section, the Secretary
17 shall—

18 ~~“(1) review each safety requirement under sub-~~
19 ~~section (b) to determine whether—~~

20 ~~“(A) any additional matter should be ad-~~
21 ~~dressed;~~

22 ~~“(B) any matter should not be addressed~~
23 ~~because the area is addressed by another appli-~~
24 ~~cable Federal standard; and~~

1 “(C) any rule or standard applicable to the
2 requirement would not improve motor vehicle
3 safety; and

4 ~~_____“(2) if the Secretary makes a positive deter-~~
54 ~~_____mination under paragraph (1), s~~Submit to the Com-
65 _____mittee on Commerce, Science, and Transportation of
76 _____the Senate and the Committee on Energy and Com-
87 _____merce of the House of Representatives a report that
98 _____includes—

109 _____“(A) an explanation of why such a rule-
110 _____making, as applicable—

121 _____“(i) should be completed; or

132 _____“(ii) ~~should can~~not be completed;

143 _____“(B) a description of any alternative action
154 _____that will be carried out by the Secretary; and

165 _____“(C) recommendations for potential legisla-
16 _____tive changes, if any.

17 _____(3) The report shall be made available to the public.

18 _____(9) VISION TEST PERFORMANCE STANDARD

19 _____

20 _____(a) IN GENERAL.—The Secretary shall initiate a rulemaking proceeding to require automated vehicles and automated driving systems to meet a minimum vision performance standard. Such a rule shall specify requirements that the automated driving systems are able to detect and respond to all objects and roadway users such as other vehicles, pedestrians, bicyclists, wheelchair users and first responders as well properly identify, read and interpret roadway signage, highway markings and other appurtenances.

21

22 (b) FINAL RULE.—The Secretary shall issue a final rule under subsection (a) within 2 years after the date of enactment of this Act.

23

24 (c) LEAD-TIME.—The standard prescribed under subsection (a) shall provide not more than 2 model years of regulatory lead-time.

25 (10) Cybersecurity Performance Standard

26

27 (a) IN GENERAL.—The Secretary shall initiate a rulemaking proceeding that shall prescribe cybersecurity standards for automated vehicles and automated driving systems. In developing the rule the Secretary may consult with other federal agencies including the National Institute of Standards and Technology, the Department of Defense and the Department of Homeland Security.

28

29 (b) FINAL RULE.—The Secretary shall issue a final rule under subsection (a) within 2 years after the date of enactment of this Act.

30

31 (c) LEAD-TIME.—The standard prescribed under subsection (a) shall provide not more than 2 model years of regulatory lead-time.

32 (10) ELECTRONIC SYSTEMS PERFORMANCE STANDARD

33

34 (a) IN GENERAL.—The Secretary shall initiate a rulemaking proceeding to require electronic systems in passenger vehicles meet a minimum performance standard. Such a rule shall specify requirements for the protection of electronic systems for vehicle safety systems and autonomous operation, and may include requirements for electronic components, the interaction of those electronic components, or the effect of

surrounding environments on those electronic systems.

35

36 (b) FINAL RULE.—The Secretary shall issue a final rule under subsection (a) within 2 years after the date of enactment of this Act.

37

38 (c) LEAD-TIME.—The standard prescribed under subsection (a) shall provide not more than 2 model years of regulatory lead-time.

39

40 (11) FUNCTIONAL SAFETY PERFORMANCE STANDARD

41

42 (a) IN GENERAL.—The Secretary shall initiate a rulemaking proceeding to require an automated vehicles and automated driving systems meet a functional safety standard. Such a rule shall require a manufacturer to certify to the Secretary that the automated vehicle and/or automated driving systems has been tested to ensure that it will operate properly under all foreseeable conditions the vehicle is designed to encounter.

43

44 (b) FINAL RULE.—The Secretary shall issue a final rule under subsection (a) within 1 year after the date of enactment of this Act.

45

46 (c) LEAD-TIME.—The standard prescribed under subsection (a) shall provide not more than 2 model years of regulatory lead-time.

47 (12) MANUAL OVERRIDE PERFORMANCE STANDARD

48

49 (a) IN GENERAL.—The Secretary shall initiate a rulemaking proceeding to require a manual override function to ensure the capability for a human to assume control of automated vehicle and automated driving

system when it malfunctions or travels outside the operational design domain. Such a rule shall specify that the manual override must be accessible to all occupants, including people with disabilities, children, and other vulnerable populations.

50

51 (b) FINAL RULE.—The Secretary shall issue a final rule under subsection (a) within 2 years after the date of enactment of this Act.

52

53 (c) LEAD-TIME.—The standard prescribed under subsection (a) shall provide not more than 2 model years of regulatory lead-time.

54

55 (13) VEHICLE AND SYSTEM UPDATE PERFORMANCE STANDARD

56

57 (a) IN GENERAL.—The Secretary shall initiate a rulemaking proceeding to require consumers be given information and any necessary training for any and all changes to the functionality, capability or operational design domain of the vehicle or system at the time an update is made to an automated vehicle and automated driving system. Such a rule shall require that cybersecurity is maintained before, during and after an update occurs.

58

59 (b) FINAL RULE.—The Secretary shall issue a final rule under subsection (a) within 2 years after the date of enactment of this Act.

60

61 (c) LEAD-TIME.—The standard prescribed under subsection (a) shall provide not more than 2 model years of regulatory lead-time.

1762

~~1863~~ “(d) JUDICIAL REVIEW.—Section 706 of title 5 shall
~~1964~~ apply to any action carried out under this section.

~~2065~~ “(e) RULE OF CONSTRUCTION.—

~~2166~~ “(1) IN GENERAL.—Each Federal motor vehicle
~~2267~~ safety standard adopted pursuant to this section
~~2368~~ shall meet the applicable requirements of section
24 30111.

“(f) . Funds in the amount of \$200,000,000 are hereby authorized to be
appropriated for each fiscal year until the rulemakings required by this
Act are completed.”

1 “(2) EFFECT OF SECTION.—Nothing in this
2 section restricts the authority of the Secretary under
3 section 30111.”.

4 (b) CONFORMING AMENDMENT.—The analysis for
5 subchapter II of chapter 301 of title 49, United States
6 Code, is amended by adding after the item relating to sec-
7 tion 30128 the following:

 “§ 30129. Updated and new motor vehicle safety standards for automated vehi-
 cles.”.

1 SEC. ■■■■. DEFINITIONS.

2 (a) IN GENERAL.—In this Act:

3 (1) AUTOMATED DRIVING SYSTEM; DEDICATED
4 HIGHLY AUTOMATED VEHICLE; HIGHLY AUTOMATED
5 VEHICLE; MANUFACTURER; MOTOR VEHICLE; MOTOR
6 VEHICLE EQUIPMENT.—The terms “automated driv-
7 ing system”, “dedicated highly automated vehicle”,
8 “highly automated vehicle”, “manufacturer”, “motor
9 vehicle”, and “motor vehicle equipment” have the
10 meanings given those terms in section 30102(a) of
11 title 49, United States Code.

12 (2) NHTSA.—The term “NHTSA” means the
13 National Highway Traffic Safety Administration.

14 (3) SECRETARY.—The term “Secretary” means
15 the Secretary of Transportation.

16 (b) AUTOMATED VEHICLE TERMINOLOGY.—Section
17 30102(a) of title 49, United States Code, is amended—

18 (1) in the matter preceding paragraph (1), by
19 striking “chapter—” and inserting “chapter:”;

20 (2) in each of paragraphs (1) through (13)—

21 (A) by inserting “The term” after the
22 paragraph designation; and

Commented [Advocates1]: By identifying deficiencies in each section, we are not agreeing with, endorsing or assenting to the inclusion of such sections in a final AV bill. Please see memo for our complete response on this section.

1 (B) by inserting a paragraph heading, the
2 text of which is comprised of the term defined
3 in that paragraph;

4 (3) by redesignating paragraphs (1) through 5
6 (13) as paragraphs (2), (3), (5), (6), (9), (10), (11),
7 (12), (13), (14), (18), (19), and (20), respectively;

8 (4) by inserting before paragraph (2) (as so re-
9 designated) the following:

10 “(1) AUTOMATED DRIVING SYSTEM.—The term
11 ‘automated driving system’ means a system the
12 hardware and software of which is collectively capa-
13 ble of performing the entire dynamic driving task on
14 a sustained basis, regardless of whether the system
15 is limited to a specific operational design domain.”;

16 (5) by inserting after paragraph (3) (as so re-
17 designated) the following:

18 “(4) DEDICATED HIGHLY AUTOMATED VEHI-
19 CLE.—The term ‘dedicated highly automated vehicle’
20 means a highly automated vehicle designed to be op-
21 erated exclusively (as defined in the SAE Inter-
22 national Recommended Practice numbered J3016
23 and dated September 30, 2016) by a Level 4 or
24 Level 5 automated driving system (as defined in that
25 Recommended Practice (or a subsequent standard
adopted by the Secretary)) for all trips.”;

1 (6) by inserting after paragraph (6) (as so re-
2 designated) the following:

3 “(7) DYNAMIC DRIVING TASK.—

4 “(A) IN GENERAL.—The term ‘dynamic
5 driving task’ means all of the real-time oper-
6 ational and tactical functions required to oper-
7 ate a motor vehicle in on-road traffic.

8 “(B) INCLUSIONS.—The term ‘dynamic
9 driving task’ includes—

10 “(i) controlling the lateral motion of a
11 motor vehicle through steering;

12 “(ii) controlling the longitudinal mo-
13 tion of a motor vehicle through accelera-
14 tion and deceleration;

15 “(iii) monitoring the driving environ-
16 ment through the detection, recognition,
17 and classification of objects and events;

18 “(iv) preparing a response to an ob-
19 ject or event;

20 “(v) executing a response to an object
21 or event;

22 “(vi) planning a maneuver; and

23 “(vii) enhancing conspicuity through
24 lighting, signaling, and gesturing.

1 “(C) EXCLUSION.—The term ‘dynamic
2 driving task’ does not include the strategic
3 functions relating to the operation of a motor
4 vehicle, such as—

5 “(i) trip scheduling;

6 “(ii) selection of a destination; and

7 “(iii) selection of a waypoint.

8 “(8) HIGHLY AUTOMATED VEHICLE.—The term
9 ‘highly automated vehicle’ means a motor vehicle
10 that—

11 “(A) has a gross vehicle weight rating of
12 not more than 10,000 pounds; and

13 “(B) is equipped with an automated driv-
14 ing system.”; and

15 (7) by inserting after paragraph (14) (as so re-
16 designated) the following:

17 “(15) OPERATIONAL DESIGN DOMAIN.—The
18 term ‘operational design domain’ means the specific
19 conditions under which a given automated driving
20 system or feature of an automated driving system is
21 designed to function.

22 “(16) PARTIAL DRIVING AUTOMATION.—The
23 term ‘partial driving automation’, with respect to a
24 driving automation system, means a Level 2 or 3 driving
25 automation system (as defined in the SAE Inter-

1 national Recommended Practice numbered J3016
2 and dated June 15, 2018).

3 “(17) PARTIALLY AUTOMATED VEHICLE.—The
4 term ‘partially automated vehicle’ means a motor ve-
5 hicle that—

6 “(A) has a gross vehicle weight rating of
7 not more than 10,000 pounds; and

8 “(B) is equipped with a Level 2 [or 3](#) driving
9 automation system (as defined in the SAE
10 International Recommended Practice numbered
11 J3016 and dated June 15, 2018).”.

12 (c) DEFINITIONS USED IN REGULATIONS AND
13 STANDARDS.—

14 (1) IN GENERAL.—Subject to paragraph (2), in
15 promulgating regulations and prescribing standards
16 under this Act and chapter 301 of title 49, United
17 States Code, the Secretary shall use the definitions
18 of the terms “automated driving system”, “dedi-
19 cated highly automated vehicle”, “dynamic driving
20 task”, “highly automated vehicle”, “operational de-
21 sign domain”, “partial driving automation”, and
22 “partially automated vehicle” provided in section
23 30102(a) of title 49, United States Code.

24 (2) USE OF INDUSTRY DEFINITIONS.—

6

1 (A) **IN GENERAL.**—If SAE International
2 (or a successor organization) provides a defini-
3 tion of the term “automated driving system”,
4 “dynamic driving task”, “operational design do-
5 main”, “partial driving automation”, or “par-
6 tially automated vehicle”, the Secretary, in pro-
7 mulgating regulations and prescribing stand-
8 ards under this Act and chapter 301 of title 49,
9 United States Code, may use the definition pro-
10 vided by SAE International (or a successor or-
11 ganization).

12 (B) **NOTIFICATION ENCOURAGED.**—If SAE
13 International (or a successor organization) re-
14 vises the definition of a term referred to in sub-
15 paragraph (A) in the Recommended Practice
16 numbered J3016, SAE International is encour-
17 aged to notify the Secretary of the revision.

18 (C) **INCORPORATION OF REVISED DEFINI-**
19 **TIONS.**—

20 (i) **NOTICE AND COMMENT.**—If SAE
21 International (or a successor organization)
22 revises the definition of a term referred to
23 in subparagraph (A) and notifies the Sec-
24 retary under subparagraph (B), the Sec-
25 retary, not later than 90 days ~~60~~ ~~90~~ ~~120~~ ~~180~~ ~~360~~ ~~days~~, shall

7

1 provide notice and an opportunity for pub-
2 lic comment with respect to whether the
3 Secretary should incorporate the revised
4 definition into any regulations promulgated
5 or standards prescribed by the Secretary
6 under this Act or chapter 301 of title 49,
7 United States Code.

8 (ii) DETERMINATION.—

9 (I) IN GENERAL.—Not later than
10 90 days after the date on which the
11 Secretary publishes the notice re-
12 quired under clause (i), the Sec-
13 retary shall—

14 (aa) determine whether to
15 incorporate a revised definition
16 referred to in that clause; and

17 (bb) publish that determina-
18 tion in the Federal Register.

19 (II) DETERMINATION NOT TO IN-
20 CORPORATE.—

21 (aa) IN GENERAL.—The
22 Secretary shall not incorporate a
23 revised definition referred to in
24 clause (i) if the Secretary deter-

8

1 mines that the revised defini-
2 tion—

3 (AA) does not meet the
4 need for motor vehicle safe-
5 ty; or

6 (BB) is otherwise in-
7 consistent with the purposes
8 of this Act and chapter 301
9 of title 49, United States
10 Code.

11 (bb) NOTIFICATION OF REA-
12 SONS.—If the Secretary does not
13 incorporate a revised definition
14 for a reason described in subitem
15 (AA) or (BB) of item (aa), the
16 Secretary shall notify SAE Inter-
17 national (or a successor organiza-
18 tion) of the reasons for not incor-
19 porating the standard.

20 (III) DETERMINATION TO INCOR-
21 PORATE.—

22 (aa) IN GENERAL.—If the
23 Secretary determines that a re-
24 vised definition referred to in
25 clause (i) should be incorporated

1 into the regulations promulgated
2 or standards prescribed under
3 this Act or chapter 301 of title
4 49, United States Code, the Sec-
5 retary shall promptly make any
6 conforming amendments to those
7 regulations or standards that are
8 necessary to incorporate the re-
9 vised definition.

10 ~~(bb) NO NOTICE AND COM-~~
11 ~~MENT REQUIRED. Section 553~~
12 ~~of title 5, United States Code,~~
13 ~~shall not apply to the making of~~
14 ~~conforming amendments under~~
15 ~~item (aa).~~

PAT19A78

Discussion draft

S.L.C.

~~1 [SEC. 111. RELATIONSHIP TO OTHER LAW.]~~

~~2 (a) IN GENERAL. Section 30103 of title 49, United~~
~~3 States Code, is amended—~~

~~4 (1) by striking subsection (b) and inserting the~~
~~5 following:~~

~~6 “(b) PREEMPTION.—~~

~~7 “(1) HIGHLY AUTOMATED VEHICLES.—~~

~~8 “(A) IN GENERAL. No State or political~~
~~9 subdivision of a State may maintain, enforce,~~
~~10 prescribe, or continue in effect any law or regu-~~
~~11 lation regarding that regulates or prescribes,~~
~~12 the design, construction, or performance of~~
~~13 highly automated vehicles, automated driving~~
~~14 systems, or components of automated driving~~
~~15 systems with respect to any rulemaking pro-~~
~~16 ceeding required under section 30129(b) from~~
~~17 PAT19A73, unless the law or regulation is~~
~~18 identical to a standard or other regulation in ef-~~
~~19 fect under this chapter.~~

~~20 “(B) TERMINATION. Subparagraph (A)~~
~~21 shall terminate with respect to any subject mat-~~
~~22 ter described in that subparagraph on the ear-~~
~~23 lier of~~

Commented [Advocates1]: By identifying deficiencies in each section, we are not agreeing with, endorsing or assenting to the inclusion of such sections in a final AV bill. Please see memo for our complete response on this section.

1 ~~“(i) the date that is ~~3~~ years~~
 2 ~~after the date of enactment of this sub-~~
 3 ~~paragraph; and~~
 4 ~~“(ii) the effective date of a motor ve-~~
 5 ~~hicle safety standard or other regulation~~
 6 ~~applicable to the same aspect of vehicle~~
 7 ~~performance covered by that subject mat-~~
 8 ~~ter, consistent with section 30129(b)~~
 9 ~~from PAT19A73;~~

10 ~~“(2) MOTOR VEHICLE STANDARD.—When a~~
 11 ~~motor vehicle safety standard is in effect under this~~
 12 ~~chapter, a State or political subdivision of a State~~
 13 may prescribe or continue in effect a standard appli-
 14 cable to the same aspect of performance of a motor
 15 vehicle or motor vehicle equipment only if the stand-
 16 ard is identical to the standard prescribed under this
 17 chapter.

18 ~~“(3) PRESERVATION OF AUTHORITY.—~~

19 ~~“(A) INTERPRETATION.—~~

20 ~~“(i) IN GENERAL.—For purposes of~~
 21 ~~paragraph (1)(A) and~~ subsection (e)(2)(B),
 22 the term ‘design, construction, or perform-
 23 ance’—

24 ~~“(I) shall be interpreted in ac-~~
 25 ~~cordance with the authority of the~~

3

1 Secretary under section 30111 with
2 respect to motor vehicle safety stand-
3 ards; and

4 “(II) does not include compliance
5 with—

6 “(aa) any traffic law or rule
7 of a State or a political subdivi-
8 sion of a State; or

9 “(bb) any law or rule of a
10 State or a political subdivision of
11 a State relating to a rule of the
12 road or the operation of a motor
13 vehicle.

14 “(ii) EFFECT OF SUBPARAGRAPH.—
15 Nothing in this subparagraph affects or
16 limits any authority of the Secretary under
17 this chapter.

18 “(B) MOTOR VEHICLE DEALERS.—Con-
19 sistent with paragraph (1)(A), nothing in this
20 subsection prohibits a State or political subdivi-
21 sion of a State from maintaining, enforcing,
22 prescribing, or continuing in effect any law or
23 regulation relating to the sale, distribution, re-
24 pair, or service of a highly automated vehicle,
25 an automated driving system, or a component

1 of automated driving systems by a dealer, man-
2 ufacturer, or distributor.

3 “(C) CONFORMITY WITH FEDERAL LAW.—
4 Nothing in this subsection preempts, restricts,
5 or limits a State or political subdivision of a
6 State from acting in accordance with any other
7 applicable Federal law.

8 “(4) HIGHER PERFORMANCE REQUIREMENT.—
9 The Federal Government, a State, or a political sub-
10 division of a State may prescribe a standard for a
11 motor vehicle, motor vehicle equipment, highly auto-
12 mated vehicle, or automated driving system obtained
13 for use by that unit of government that imposes a
14 higher performance requirement than otherwise re-
15 quired by an applicable standard under this chapter.

16 “(5) STATE ENFORCEMENT.—A State may en-
17 force a standard that is identical to a standard pre-
18 scribed under this chapter.”; and

19 (2) by striking subsection (e) and inserting the
20 following:

21 “(e) STATE LAW LIABILITY.—

22 “(1) IN GENERAL.—Compliance with a motor
23 vehicle safety standard in effect under this chapter
24 does not exempt any person from liability at com-
25 mon law.

1 “(2) EFFECT OF SECTION.—Nothing in this
2 section exempts any person from liability—

3 “(A) at common law; or

4 “(B) under a State law, unless the State
5 law directly or specifically regulates or pre-
6 scribes the design, construction, or performance
7 of a highly automated vehicle, automated driv-
8 ing system, or component of an automated driv-
9 ing system.

10 ø“(3) LIMITATION ON PREDISPUTE ARBITRA-
11 TION.—ø*TO BE SUPPLIED;*” .¿

12 (b) HIGHLY AUTOMATED VEHICLES.—

13 ø(1) DRIVER AND OPERATOR OBLIGATION.—A
14 manufacturer of a highly automated vehicle or auto-
15 mated driving system used in interstate commerce
16 shall ensure that the highly automated vehicle is ca-
17 pable of assuming and observing all duties pre-
18 scribed for, or prohibitions imposed on, an operator
19 of a motor vehicle under applicable Federal and
20 State laws regarding driving functions while the
21 automated driving system is engaged.¿

22 (2) LICENSING.—A State may not issue a
23 motor vehicle operator’s license for the operation or
24 use of a dedicated highly automated vehicle in a
25 manner that discriminates on the basis of disability

1 (as defined in section 3 of the Americans with Dis-
2 abilities Act of 1990 (42 U.S.C. 12102)).