SEC. _____.

UPDATED AND NEW MOTOR VEHICLE SAFETY STANDARDS FOR AUTOMATED VEHICLES.

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

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

“(a) SAFETY PRIORITY PLAN.—

“(1) IN GENERAL.—Not later than 180 days after the date of enactment of this section, the Secretary shall make available to the public and submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Energy and Commerce of the House of Representatives a safety priority plan for highly automated vehicles.

“(2) INCLUSION OF PRIORITIES.—The plan under paragraph (1) shall include a description of the overall priorities of the National Highway Traffic Safety Administration during the 10-year period beginning on the date of issuance of the plan, including motor vehicle safety standards or other regulations required—

“(A) to update the motor vehicle safety standards in effect on the date of enactment of
this section as necessary to accommodate the
development and deployment of highly auto-
mated vehicles;

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

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

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

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

“(A) a description of the actions needed to
complete each safety mandate and initiative;

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

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

“(4) SAFETY-RELATED ELEMENTS.—In devel-
oping the plan required under paragraph (1), the
Secretary shall address each of the following safety-
related elements, as necessary to accommodate the
safe introduction of highly automated vehicles into
interstate commerce:
“(A) System safety.—The avoidance of unreasonable risks to safety, including—

“(i) safeguards to ensure that systems, including hardware, software, electrical, and electronic systems, perform intended functions; and

“(ii) the mitigation of unreasonable risks to safety caused by malfunction of an automated driving system, including any component of such a system.

“(B) Automation function.—Elements relating to the function of automation, including the following:

“(i) The operational design domain in which the highly automated vehicle is capable of safely operating, including—

“(I) the type of roadway, geographical area, speed range, and environmental and temporal conditions in which the automated driving system is capable of operating;

“(II) any roadway or infrastructure asset required for the operation of the highly automated vehicle or automated driving system, such as
roadside equipment, pavement markings, signage, and traffic signals; and

“(III) the means by which the highly automated vehicle or automated driving system will respond if the defined operational design domain unexpectedly changes.

“(ii) The ability of the highly automated vehicle or automated driving system to detect and transition to a minimal-risk condition when a malfunction is encountered, when operating in a degraded state, or when operating outside of the operational design domain, including consideration of the potential safety risks associated with a particular fallback strategy, such as whether the strategy requires—

“(I) a human driver;

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

“(III) manual override capabilities.

“(iii) Precrash scenarios, including control loss, crossing-path crashes, lane change, head-on and opposite-direction
travel, and rear-end, road departure, and low-speed situations.

“(iv) The performance of the highly automated vehicle through the development and implementation of tests, including simulation, test track, and onroad testing.

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

“(i) object and event detection and response capabilities of the highly automated driving system, including—

“(I) behavioral competencies; and

“(II) crash avoidance capability;

and

“(ii) detection, classification, and response to any circumstance or condition relevant to the dynamic driving task within the operational design domain, including objects, motorcyclists, bicyclists, pedestrians, children, individuals with disabilities, emergency response personnel, other road users, roadway signs, highway markers, and traffic signals, and animals.
“(D) Human-machine interface.—Elements relating to human-machine interface, including—

“(i) methods of informing a human driver or operator regarding whether an automated driving system is functioning properly;

“(ii) for a highly automated vehicle classified as Level 3, the methods to address driver reengagement, which may include driver engagement monitoring to assess driver awareness and readiness to perform the full driving task; and

“(iii) the use of a human-machine interface by individuals with disabilities through visual, auditory, or haptic displays, or other methods.

“(E) Crashworthiness.—Practicable protection for all occupants given any planned seating positions or interior configurations and, for an unoccupied highly automated vehicle, consideration of crash compatibility with other motor vehicles and road users.
“(F) CYBERSECURITY.—The minimization of cybersecurity risks to safety, including through—

“(i) the evaluation of elements of the supply chain to identify and address cybersecurity vulnerabilities;

“(ii) the exchange of information regarding any vulnerabilities discovered from field incidents, internal testing, or external security research; and

“(iii) mechanisms for alerting a human driver or operator regarding cybersecurity vulnerabilities.

“(G) CAPABILITIES.—Determination of the capabilities and limitations of an automated driving system, including each automated driving system technology and associated functions.

“(H) POST-CRASH BEHAVIOR.—The post-crash behavior of the highly automated vehicle or automated driving system if sensors or critical systems are damaged in a crash.

“(I) APPLICABLE LAWS.—Within the operational design domain, the manner in which the automated driving system is designed to comply with—
“(i) applicable traffic laws; and
“(ii) rules of the road.
“(5) PERIODIC UPDATING.—The Secretary shall update the plan under paragraph (1)—
“(A) not less frequently than once every 2 years; or
“(B) more frequently, as the Secretary determines to be necessary.
“(6) CHANGE IN PRIORITIES.—
“(A) IN GENERAL.—The Secretary may modify the priorities described in the plan under paragraph (1) at any time to address matters the Secretary considers to be of greater priority.
“(B) ACTION BY SECRETARY.—In any case in which the Secretary determines that the plan under paragraph (1) requires updating, the Secretary shall—
“(i) prepare an interim update of the plan; and
“(ii) submit the updated plan to—
“(I) the Committee on Commerce, Science, and Transportation of the Senate; and
“(II) the Committee on Energy and Commerce of the House of Representatives.

“(b) Rulemaking.—

“(1) In general.—Not later than 1 year after the date of enactment of this section, the Secretary shall initiate a rulemaking to carry out subsection (a).

“(2) Safety assurance rulemaking.—Not later than [10] years after the date of enactment of this section, the Secretary shall promulgate a safety assurance rule [for manufacturers] to objectively and transparently assess and validate the safety of the design, construction, and performance of a highly automated vehicle or automated driving system by issuing motor vehicle safety standards or other regulations, as necessary, to address each safety-related element described in subsection (a)(4).

“(3) Evaluation of standard.—The Secretary shall—

“(A) evaluate the standard of United Laboratories entitled ‘Standard for Safety for the Evaluation of Autonomous Products’ and numbered UL 4600; and

“...
“(B) incorporate elements of that standard into motor vehicle safety standards or other regulations promulgated pursuant to paragraph (2), as the Secretary determines to be necessary.”

“(4) SAFETY SELF-ASSESSMENT.—

“(A) IN GENERAL.—Not later than 2 years after the date of enactment of this section, the Secretary shall issue a final rule requiring the submission of a safety assessment certification by each manufacturer introducing highly automated vehicles or automated driving systems into interstate commerce until the date on which the rule under paragraph (2) is promulgated.

“(B) INCLUSIONS.—The rule under subparagraph (A) shall include—

“(i) a specification of each manufacturer required to submit certifications;

“(ii) a clear description of the relevant test results, data, and other contents required to be submitted by each manufacturer in order to demonstrate that the highly automated vehicles or automated
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driving systems of the manufacturer are
likely—
“(I) to maintain safety;
“(II) to function as intended; and
“(III) to contain fail-safe fea-
tures; and
“(iii) a specification of the cir-
cumstances under which certifications are
required to be updated or resubmitted.
“(C) INTERIM REQUIREMENT.—During the
period beginning on the date of enactment of
this section and ending on the date on which
the final rule issued pursuant to subparagraph
(A) takes effect, safety assessment letters shall
be submitted to the National Highway Traffic
Safety Administration as contemplated by
[most recent relevant guidance] or any suc-
cessor guidance issued with respect to highly
automated vehicles requiring a safety assess-
ment letter.
“(D) PERIODIC REVIEW AND UPDATING.—
Not later than 5 years after the date on which
the final rule is issued under subparagraph (A),
and not less frequently than once every 5 years
thereafter, the Secretary shall—
“(i) review the rule; and

“(ii) update the rule, as the Secretary determines to be necessary.

“(E) RULES OF CONSTRUCTION.—

“(i) IN GENERAL.—Nothing in this section limits or affects the authority of the Secretary under any other provision of law.

“(ii) NO CONDITIONS ON DEPLOYMENT.—

“(I) IN GENERAL.—The Secretary may not condition the introduction of highly automated vehicles or automated driving systems into commerce on a review of a safety assessment certification.

“(II) EFFECT.—Nothing in this clause precludes the Secretary from using information contained in a certification under this subsection for any other purpose.

“(iii) NO NEW AUTHORITIES.—Nothing in this section provides to the Secretary any new authority, except with re-
Discussion draft

spect to the promulgation of rules pursuant to this section.

“(iv) DISCOVERY.—Nothing in this section affects discovery, a subpoena or any other court order, or any other judicial process otherwise in accordance with applicable Federal or State law.

[(“(5) DRIVER ENGAGEMENT.—Not later than [_____] years after the date of enactment of this section, the Secretary shall require manufacturers to install systems in partially automated vehicles and highly automated vehicles classified as Level 3—]

[“(A) to sense, as applicable—]

[“(i) the level of engagement of each driver in a partially automated vehicle; or]

[“(ii) the awareness of a driver in a highly automated vehicle classified as Level 3; and]

[“(B) to alert the driver when that engagement or awareness is lacking while the partial driving automation or automated driving system is engaged.]

[(“(6) DATA RECORDING.—]

[“(A) IN GENERAL.—Not later than [_____] years after the date of enactment of]
this section, the Secretary shall update part 563 of title 49, Code of Federal Regulations, as the Secretary determines to be necessary to revise the data elements to account for partial driving automation and automated driving systems, including the control status of a vehicle during a crash."

"(B) PRIORITY.—Notwithstanding any other provision of law, the Secretary shall prioritize the update under subparagraph (A) to gather data necessary to promulgate the rule pursuant to paragraph (2)."

"(7) OPERATING SAFEGUARDS.—Not later than _____ years after the date of enactment of this section, the Secretary shall issue a motor vehicle safety standard requiring each partially automated vehicle to incorporate system safeguards that limit the use of the partial driving automation to the operational design domain for which the partial driving automation was designed."

"(8) UPDATING SAFETY STANDARDS.—"

"(A) IN GENERAL.—Not later than 3 years after the date of enactment of this section, the Secretary shall finalize regulations to update, as necessary, existing Federal motor ve-
vehicle safety standards, testing procedures, and methods for determining compliance with safety standards for dedicated highly automated vehicles or highly automated vehicles when the automated driving system is performing the entirety of the dynamic driving task."

[(“(B) CONDITIONS.—In carrying out subparagraph (A), the Secretary—"

[“(i) shall ensure that all requirements remain objective and practicable; and"

[“(ii) shall not modify the purpose or intent of any Federal motor vehicle safety standard.]"

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

“(1) review each safety requirement under subsection (b) to determine whether—"

“(A) any additional matter should be addressed;"

“(B) any matter should not be addressed because the area is addressed by another applicable Federal standard; and"
“(C) any rule or standard applicable to the requirement would not improve motor vehicle safety; and

“(2) if the Secretary makes a positive determination under paragraph (1), submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Energy and Commerce of the House of Representatives a report that includes—

“(A) an explanation of why such a rule-making, as applicable—

“(i) should be completed; or

“(ii) should not be completed;

“(B) a description of any alternative action that will be carried out by the Secretary; and

“(C) recommendations for potential legislative changes, if any.

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

“(e) RULE OF CONSTRUCTION.—

“(1) IN GENERAL.—Each Federal motor vehicle safety standard adopted pursuant to this section shall meet the applicable requirements of section 30111.
“(2) Effect of section.—Nothing in this section restricts the authority of the Secretary under section 30111.”.

(b) Conforming Amendment.—The analysis for subchapter II of chapter 301 of title 49, United States Code, is amended by adding after the item relating to section 30128 the following:

“§ 30129. Updated and new motor vehicle safety standards for automated vehicles.”.