

D R A F T
FOR DISCUSSION ONLY

AUTOMATED VEHICLES ACT

NATIONAL CONFERENCE OF COMMISSIONERS
ON UNIFORM STATE LAWS

April 5-6, 2019 Drafting Committee Meeting

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ON UNIFORM STATE LAWS

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April 5-6, 2019

DRAFTING COMMITTEE ON AUTOMATED VEHICLES ACT

The Committee appointed by and representing the National Conference of Commissioners on Uniform State Laws in preparing this act consists of the following individuals:

THOMAS J. BUIREWEG, 3025 Boardwalk St., Suite 120, Ann Arbor, MI 48108, *Chair*

H. CLAYTON WALKER, 1201 Main St., 22nd Floor, Columbia, SC 29201, *Vice Chair*

PAMELA WINSTON BERTANI, 728 Texas St., Suite 4, Fairfield, CA 94533

K. KING BURNETT, 76 Taylor Rd., Stow, MA 01775-1616

DALE G. HIGER, 1302 E. Warm Springs Ave., Boise, ID 83712

MARY GAY JONES, 18 N. Foxhill Rd., North Salt Lake, UT 84054

DONALD E. MIELKE, 6534 S. Chase St., Littleton, CO 80123-6835

MICHELE RADOSEVICH, 1201 3rd Ave., Suite 2200, Seattle, WA 98101-3045

LEONARD J. REESE, 1806 Niles Rd., Austin, TX 78703

JEROD E. TUFTE, State Capitol, 600 E. Boulevard Ave., Bismarck, ND 58505-0530

BRYANT WALKER SMITH, University of South Carolina School of Law, 1525 Senate St.,
Columbia, SC 29201, *Reporter*

DEREK TARVER, 1441 Main St., Suite 1200, Columbia, SC 29201, *Associate Reporter*

EX OFFICIO

ANITA RAMASASTRY, University of Washington School of Law, William H. Gates Hall,
Box 353020, Seattle, WA 98195-3020, *President*

JULIET M. MORINGIELLO, Widener University Commonwealth Law School, 3800 Vartan
Way, Harrisburg, PA 17110-9742, *Division Chair*

AMERICAN BAR ASSOCIATION ADVISOR

KELLY A. DONOHUE, 1800 M St. NW, Suite 800N, Washington, DC 20036-5850, *ABA
Advisor*

EXECUTIVE DIRECTOR

STEVEN L. WILLBORN, Uniform Law Commission, 111 N. Wabash, Suite 1010, Chicago, IL
60602, *Interim Executive Director*

Copies of this Act may be obtained from:

NATIONAL CONFERENCE OF COMMISSIONERS
ON UNIFORM STATE LAWS
111 N. Wabash Ave., Suite 1010
Chicago, IL 60602
312/450-6600
www.uniformlaws.org

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1 **AUTOMATED VEHICLES ACT**

2 **Prefatory Note**

3 The Automated Vehicles Act addresses a narrow but foundational set of the many legal and
4 policy issues raised by automated driving. It is intended to explicitly accommodate and
5 specifically regulate what it refers to as the automated operation of automated vehicles.
6 Colloquially, these vehicles may also be described as autonomous, driverless, or self-driving.
7 Under at least some circumstances, they can steer, brake, accelerate, and signal by themselves
8 while monitoring the road so that a human driver need not do so.
9

10 This act covers the deployment of these automated vehicles on roads held open to the public. It
11 does not cover testing of aspirational automated vehicles for the purposes of research and
12 development. It does not cover remote driving, in which a human drives a vehicle while outside
13 of or far from it. And it does not cover vehicle features that merely assist a human driver; even if
14 these features brake, steer, and accelerate, they are still designed with the expectation that a
15 human driver will monitor the road.
16

17 What the act does cover is still vast, for automated driving encompasses a wide range of
18 technologies, applications of those technologies, business models for those applications, and
19 participants in those business models. See Bryant Walker Smith, *How Governments Can*
20 *Promote Automated Driving*, 47 N.M. L. Rev. 99 (2017).
21

22 For example, a vehicle capable of automated operation may or may not be designed for all roads,
23 communities, and travel conditions; be capable of automated operation for an entire trip; include
24 a traditional steering wheel, throttle, and brake pedal; need a human who can resume driving
25 when requested to do so; need this human to be physically present in the vehicle; rely on a
26 human located far from the vehicle to provide instructions and information; use specific sensor
27 technologies, including camera, radar, lidar, inertial movement, sonar, and GPS; use highly
28 detailed maps that are created in advance; communicate electronically with other vehicles; be
29 originally manufactured as an automated vehicle; be retrofitted by a developer other than the
30 vehicle manufacturer; be modified by third parties without the involvement of that developer; be
31 sold to individual consumers; be deployed only as part of a fleet; carry passengers, deliver goods,
32 provide services, or perform novel functions; and so on.
33

34 In other words, because there could be so many different forms of automated driving, picturing
35 and attempting to legislate for the singular “driverless car” can be both impractical and
36 counterproductive. Instead, it is more helpful to identify and explore assumptions in
37 contemporary legal rules as well as in contemporary discussions of automated driving. This act is
38 a product of this collective exploration.
39

40 The act accordingly attempts to reconcile automated driving with a typical state motor vehicle
41 code. For this reason, in some ways the structure of the draft mirrors such a code: Many of its
42 sections—including definitions, driver licensing, vehicle registration, equipment, rules of the
43 road, and (in mere placeholder form) insurance—correspond to, refer to, and can be incorporated
44 into existing sections of a typical vehicle code. However, because existing codes vary widely in

1 both substance and structure, the work of carefully codifying this act is left to each state that
2 adopts it.

3
4 One key aspect of this act—automated driving providers—is not part of a traditional vehicle
5 code but has strong parallels in how some states have approached automated vehicle testing, see,
6 e.g., Cal. Veh. Code 38750; Ohio Executive Order 2018-04K, and in how both the National
7 Transport Commission of Australia and the Law Commission of England and Wales envision
8 automated vehicle deployment, see NTC Australia, Changing driving laws to support automated
9 vehicles, ntc.gov.au/current-projects/changing-driving-laws-to-support-automated-vehicles
10 (“automated driving system entity”); Law Commission, Automated Vehicles: a joint preliminary
11 consultation paper, lawcom.gov.uk/project/automated-vehicles (same).

12
13 Under the Automated Vehicles Act, an automated driving provider declares itself to the state and
14 designates the automated vehicles for which it will act as the legal driver. This provider might be
15 an automated driving system developer, a vehicle manufacturer, a data provider, a fleet operator,
16 an insurer, an affiliated firm, or another kind of market participant that has yet to emerge. It is
17 defined not by a specific role in the stream of commerce but, rather, by a willingness to self-
18 identify and an ability to meet the technical and legal requirements specified in the act.

19
20 Only an automated vehicle that is associated with an automated driving provider may be
21 registered. In this way, the Automated Vehicles Act uses the motor vehicle registration
22 framework that already exists in states—and that applies to both conventional and automated
23 vehicles—to incentivize self-identification by automated driving providers. By harnessing an
24 existing framework, the act also seeks to respect and empower state motor vehicle agencies.

25
26 Fundamentally, this act is about safety—encouraging the responsible deployment of automated
27 vehicles in a way that balances concerns about the current safety of conventional driving with
28 concerns about the potential safety of automated driving. As existing automated driving laws and
29 policies demonstrate, states approach this balancing act in different ways. The Automated
30 Vehicles Act draws from and builds on these approaches.

1 **AUTOMATED VEHICLES ACT**

2 *Legislative Note:* This act should be codified into the vehicle code or the equivalent law of this
3 state according to state practice. This codification could involve amending existing provisions of
4 the vehicle code, inserting provisions within existing sections of the vehicle code, or adding new
5 sections to the vehicle code. The act should be codified so that, in relation to automated vehicles,
6 its provisions supplement, modify, and clarify—but do not wholly displace—generally applicable
7 state vehicle law.

8
9 **Comment**

10
11 As stated in the legislative note, the Automated Vehicles Act is intended to supplement, modify,
12 and clarify—but not wholly displace—generally applicable state motor vehicle law. Vehicle law
13 typically addresses vehicle titling, vehicle registration, driver licensing, rules of the road, and
14 similar topics. However, states are not consistent in the substance of the structure of this law. For
15 example, many states use the term “vehicle code” to refer to motor vehicle law generally (as
16 does this act), but others use the term to refer to only a subset of this law, and others do not use
17 the term at all.

18
19 It is against this backdrop that some states have enacted legislation specific to automated driving.
20 This legislation has been codified in various ways, including as a standalone chapter, see, e.g.,
21 NRS Chapter 482A, as new sections within the vehicle code or its equivalent, see, e.g., Cal. Veh.
22 Code div. 16.6, as new provisions within existing sections of the vehicle code, see, e.g.,
23 M.C.L.A. 257.36, and as amendments to existing provisions of the vehicle code, see, e.g., T.C.A.
24 § 55-8-101. Some states have taken multiple approaches. Compare, e.g., Col. Rev. Stat. Ann. §
25 42-1-102 with § 42-4-110 with § 42-4-242.

26
27 Regardless of how this legislation has been codified, state motor vehicle law still generally
28 applies with respect to automated driving. In some cases, legislation expressly excludes the
29 application of specified provisions of the vehicle code, see, e.g., Fla. Stat. Ann. § 316.305,
30 expressly excludes the application of unspecified inconsistent provisions, see, e.g., Col. Revised
31 Stat. Ann. § 42-4-242, or would seem to implicitly exclude the application of inconsistent
32 provisions, see, e.g., Cal. Vehicle Code § 38755. In no case, however, does legislation wholly or
33 even largely remove automated driving from the vehicle code.

34
35 This act takes a similar approach. Early in the process, the Committee considered whether to (1)
36 create a new legal framework for automated vehicles to wholly supplant existing vehicle codes,
37 (2) adopt a model vehicle code applicable to all motor vehicles and then amend it to explicitly
38 address automated vehicles, or (3) draft a hybrid act to map an existing vehicle code onto
39 automated vehicles. After determining the first two options to be impractical if not undesirable,
40 the Committee concluded that only a hybrid act could effectively address the complexity and
41 diversity of existing motor vehicle law.

42
43 **SECTION 1. SHORT TITLE.** This [act] may be cited as the Automated Vehicles Act.

44 **Comment**

1
2 This eponymous act uses the term “automated vehicle” to describe a motor vehicle that can—
3 under at least some circumstances—steer, brake, and accelerate by itself while *monitoring the*
4 *road so that the human driver need not do so*. This definition excludes a vehicle that has only a
5 driver assistance system, because such a system is designed with the expectation that a human
6 driver will still monitor the road even as the system steers, brakes, and accelerates. A vehicle is
7 an automated vehicle even if it is not currently under “automated operation”—that is, even if a
8 human driver rather than the vehicle itself is currently steering, braking, accelerating, or simply
9 monitoring the road.

10
11 This ambiguity is one of the reasons why the leading definitional document for automated
12 driving, SAE J3016 (2018), eschews the term “automated vehicle” in favor of lengthier and more
13 specific alternatives. However, the U.S. National Highway Traffic Safety Administration, many
14 U.S. states, and even the United Nations use “automated vehicle” or a similar term. Accordingly,
15 this act likewise refers to automated vehicles as well as to the automated driving systems
16 equipped on these vehicles and to the automated operation of these vehicles. These terms and
17 others are explained in the next section.

18
19 The act’s titular reference to “vehicles” rather than to “driving” does not exclude the latter, just
20 as state vehicles codes can address not only vehicles but also driving and drivers.

21
22 **SECTION 2. DEFINITION.** In this [act]:

23 (1) “Associated automated vehicle” means an automated vehicle that an automated
24 driving provider designates pursuant to Section 6.

25 (2) “Automated driving provider” means a person that declares itself to the [relevant state
26 agency] pursuant to Section 6.

27 (3) “Automated driving system” means the hardware and software collectively capable of
28 performing the entire dynamic driving task on a sustained basis.

29 (4) “Automated operation” means the performance of the entire dynamic driving task by
30 an automated driving system. Automated operation begins upon the performance of the entire
31 dynamic driving task by an automated driving system and continues until a human driver or
32 operator terminates the automated operation.

33 (5) “Automated vehicle” means a motor vehicle with an automated driving system.

34 (6) “Completely automated trip” means travel in an automated vehicle that, from the

1 point of departure until the point of arrival, is under automated operation by means of an
2 automated driving system designed to achieve a minimal risk condition.

3 (7) “Dedicated automated vehicle” means an automated vehicle designed for exclusively
4 automated operation when used for transportation on a [road open to the public].

5 (8) “Drive” means as provided in [this state’s vehicle code], except that an automated
6 driving provider exclusively drives an associated automated vehicle under automated operation.

7 (9) “Driver” means as provided in [this state’s vehicle code], except that an automated
8 driving provider is the exclusive driver of an associated automated vehicle under automated
9 operation.

10 (10) “Dynamic driving task” means the real-time operational and tactical functions
11 required to operate a vehicle in on-road traffic, including controlling lateral and longitudinal
12 vehicle motion, monitoring the driving environment, executing responses to objects and events,
13 planning vehicle maneuvers, and enhancing vehicle conspicuity. The term does not mean the
14 strategic functions of driving, including scheduling trips, selecting destinations, and specifying
15 routes.

16 (11) “Minimal risk condition” means a condition to which a vehicle user or an automated
17 driving system may bring a vehicle to reduce the risk of a crash when a trip cannot or should not
18 be completed.

19 (12) “Operate” means as provided in [this state’s vehicle code], except that an automated
20 driving provider exclusively operates an associated automated vehicle under automated
21 operation.

22 (13) “Operational design domain” means the environmental, geographic, time-of-day,
23 traffic, infrastructure, and other conditions under which an automated driving system is

1 specifically designed to function.

2 (14) “Operator” means as provided in [this state’s vehicle code], except that an automated
3 driving provider is the exclusive operator of an associated automated vehicle under automated
4 operation.

5 (15) “Person” means as provided in [this state’s vehicle code.] [means an individual,
6 estate, business or nonprofit entity, public corporation, government or governmental subdivision,
7 agency, or instrumentality, or other legal entity.]

8
9 **Legislative Note:** *If the state integrates this act into the general vehicle code, these definitions
10 should be codified in the general definitions section.*

11
12 **Legislative Note:** *The “relevant state agency” referred to in paragraph 2 may be a department
13 or division of motor vehicles or another state agency responsible for the registration of motor
14 vehicles or the licensing of drivers.*

15
16 **Legislative Note:** *States use a variety of terms to describe a “road open to the public” as used in
17 paragraph 7, including road, roadway, and highway. This term may also encompass some
18 privately or publicly operated parking facilities. If the state consistently uses a term to refer to
19 such a road, it should be used here.*

20
21 **Legislative Note:** *Paragraphs 8, 9, 12, and 14 provide definitions for terms that may already be
22 used in state vehicle law and, if so, may or may not already be defined statutorily. If a term is not
23 used in statute or case law, it may be omitted, although a state may wish to retain all four terms
24 to reduce future interpretive ambiguity and increase interstate consistency. If a term is already
25 defined statutorily, that definition may be amended directly rather than by reference.*

26
27 **Legislative Note:** *The phrase “this state’s vehicle code” as used in paragraphs 8, 9, 12, 14, and
28 15 refers to a state’s laws on, inter alia, the licensing of drivers and the titling, registration, and
29 operation of motor vehicles. These laws are generally statutory but may be regulatory. They
30 generally include and are broader than the rules of the road.*

31
32 **Legislative Note:** *Paragraph 15 provides a definition for “person” if and only if the term is not
33 already defined statutorily for the purpose of state vehicle law or is defined statutorily to include
34 only natural persons.*

35
36 **Comment**

37
38 Although the 15 terms defined in this section are best understood in context, some points of
39 introduction and clarification may be helpful.

1
2 First, consistent with the practice of the U.S. National Highway Traffic Safety Administration
3 and several U.S. states, this section adapts some terms and definitions from the leading
4 definitional document for automated driving, SAE J3016 (2018),
5 sae.org/standards/content/j3016_201806. In particular, paragraphs 3, 7, 10, 11, and 13 borrow
6 from SAE J3016 but incorporate changes for legal or functional clarity. These are essential
7 definitions.

8
9 Second, this section references some terms that may already be used in state motor vehicle law,
10 including those in paragraphs 8, 9, 12, and 14. These terms are used inconsistently across and
11 even within states. See generally Bryant Walker Smith, *Automated Vehicles Are Probably Legal*
12 *in the United States*, 1 Tex. A&M L. Rev. 411, 463-74 (2014). Because interpretation of these
13 terms can have dramatic consequences under state vehicle law—even if they are not defined
14 statutorily—these paragraphs clarify the definitions in the context of automated driving without
15 disrupting the more general definitions.

16
17 Third, the “automated driving provider” concept referenced in paragraph 2 is foundational to the
18 Automated Vehicles Act. As explained in section 6 and the accompanying comment, this act
19 permits the ordinary registration of an automated vehicle only if some qualified entity vouches
20 for that vehicle pursuant to section 6. This entity may be the same as or different than the entity
21 that registers the vehicle. For example, the developer of an automated driving system might be
22 the automated driving provider for an automated vehicle that is owned and accordingly
23 registered by an individual consumer.

24
25 Fourth, under paragraph 4, “automated operation” can be terminated only by a human driver or
26 operator. A human driver or operator initiates this termination through a command or other
27 deliberate act that is inconsistent with the continued performance of the entire dynamic driving
28 task by the automated driving system. This means that a vehicle with an automated driving
29 system that has stopped functioning – whether by or despite its design – can still be under
30 automated operation in a legal sense even if it is not under automated operation in a technical
31 sense. As a technical and conceptual matter, the transition back to human driving can be quite
32 complex, and this definition does not explicitly address certain edge cases that may require
33 judicial prudence. For example, if a human driver or operator reasonably terminates automated
34 operation to avoid a risk of imminent harm proximately caused by the automated driving
35 systems, then automated operation may be deemed to continue until the risk is avoided, realized,
36 or enhanced.

37
38 Fifth, several definitions contain nuances that may not be immediately obvious. A vehicle
39 equipped with an automated driving system is considered an “automated vehicle” under
40 paragraph 5 regardless of whether the vehicle is under automated operation. A vehicle is still a
41 “dedicated automated vehicle” under paragraph 7 even if it can or must be driven by a human in
42 certain terminal situations such as those involving maintenance, storage, inspection, and post-
43 incident removal.

44
45 **SECTION 3. APPLICATION; GOVERNING LAW.**

1 (a) This [act] applies to the ownership, registration, insurance, and operation of an
2 automated vehicle, even if the ownership, registration, insurance, and operation of the vehicle
3 complied with laws other than this [act] before [the effective date of this act].

4 (b) Except as specifically provided, [this state’s vehicle code] applies with respect to an
5 automated vehicle.

6 (c) [This state’s vehicle code] must be interpreted to facilitate the development and
7 deployment of automated vehicles in a way that improves traffic safety.

8 (d) The [relevant state agency or agencies] may make rules, issue interpretations, and
9 take other actions to administer and enforce this [act].

10 **Legislative Note:** *If the state integrates this act into the general vehicle code, these provisions*
11 *should be codified in a new section on automated driving generally.*

12
13 **Legislative Note:** *Paragraph b clarifies that state vehicle law—including, inter alia, rules for*
14 *vehicle ownership, registration, insurance, and operation—still applies with respect to*
15 *automated vehicles. This act should be codified accordingly.*

16
17 **Legislative Note:** *The agencies in paragraph d may include those responsible for registration of*
18 *motor vehicles, licensing of drivers, enforcement of rules of the road, and regulation of*
19 *automotive insurance, among others. This paragraph may be removed or modified if it is*
20 *unnecessary or inconsistent with state practice.*

21
22 **Legislative Note:** *In adopting this act, a state may wish to identify, review, and consider*
23 *modifying or repealing prior legislation that specifically addresses automated driving.*

24 25 **Comment**

26
27 The Automated Vehicles Act is intended to clarify, modify, and supplement—but not replace—a
28 state’s existing vehicle code in relation to automated vehicles. Accordingly, this section clarifies
29 that the vehicle code both continues to apply to automated vehicles and must be interpreted in a
30 way that is not necessarily inconsistent with automated operation of these vehicles. This act
31 specifically addresses provisions common to many vehicle codes, such as a prohibition on
32 unattended vehicles, that might otherwise be construed in a way that is incompatible with
33 automated driving. However, the general instruction of paragraph c (as well as its companions in
34 later sections of this act) are intended to account for unique aspects of a state’s law that may not
35 be specifically addressed by this act or identified in conjunction with the state’s adoption of this
36 act.

1 This section also explicitly empowers relevant state agencies to administer and enforce this act.
2 As in other sections of this act, this authorization is intended to give these agencies the authority
3 and flexibility to effectively address unexpected developments in automated driving. If a state
4 determines that this authorization is unnecessary, duplicative, or undesirable, it may modify or
5 omit paragraph d.
6

7 Many states have already enacted legislation regarding automated driving. In some of these
8 states, the legislation relates exclusively or primarily to testing for the purposes of research and
9 development, which is not specifically addressed by this act. In others, the legislation may
10 address or implicate topics within the scope of this act. For example, some states have defined
11 the driver or operator of an automated vehicle in a way that may be inconsistent with this act's
12 treatment of that question. In such a case, the state may wish to clarify the status of this prior
13 legislation in conjunction with its adoption of this act.
14

15 SECTION 4. DRIVER LICENSING.

16 (a) An individual is not required to hold a [driving license] to take a completely
17 automated trip.

18 (b) An automated driving provider is not required to hold a [driving license] to drive or
19 operate an automated vehicle under automated operation.

20 *Legislative Note: If the state integrates this act into the general vehicle code, these provisions*
21 *should be codified in the driver licensing section.*
22

23 *Legislative Note: The particular term used by the state should be substituted for “driving*
24 *license” in this section.*
25

26 Comment

27
28 Under existing state law, an individual who drives generally needs to hold a valid driving
29 license. Conversely, an individual who does not drive generally does not need to hold such a
30 license. The Automated Vehicles Act does not change these existing rules. However, its
31 definitions of drive, driver, operate, and operator do remove automated driving from this existing
32 framework.
33

34 This section clarifies that an individual who takes a completely automated trip (in which an
35 automated driving system capable of achieving a minimal risk condition performs the dynamic
36 driving task from the beginning through the end of the trip) does not need a driving license, even
37 if the individual sits in the conventional driving position, turns on the vehicle, or performs other
38 actions that may constitute driving in more conventional contexts. Conversely, because a state's
39 existing vehicle code continues to apply, an individual who drives for part of a trip does need a
40 driving license, even if the individual relies on an automated driving system for part of the trip.
41

1 This act does not define a trip, which is generally understood to be a journey from an origin to a
2 destination. The driveway of a house, the curb outside an office building, and a space in a
3 parking garage are possible destinations. A freeway shoulder generally is not. This means that,
4 for example, an automated vehicle capable of automated operation only on freeways needs a
5 licensed driver, because pulling off to the side of the road before the freeway ends does not
6 complete the trip. However, an automated vehicle does not need a licensed driver solely because
7 its automated driving system achieves a minimal risk condition in response to a hardware failure,
8 a severe blizzard, or another condition that unforeseeably delays the trip's completion.

9
10 Finally, even though an automated driving provider is the legal driver of an automated vehicle
11 under automated operation, the provider is not required to hold a conventional license. This act
12 instead prescribes a regulatory framework that is specific to automated driving providers.

13 14 **SECTION 5. VEHICLE REGISTRATION.**

15 (a) The [owner] of an automated vehicle must comply with [this state's requirements for
16 the registration of motor vehicles].

17 (b) At registration, the [owner] shall indicate to [the relevant state agency] whether the
18 vehicle is an automated vehicle, but this indication shall not bind the agency to register the
19 vehicle as an automated vehicle.

20 (c) The [relevant state agency] may grant, maintain, or renew the registration of an
21 automated vehicle only if an automated driving provider designates the vehicle as an associated
22 automated vehicle pursuant to Section 6.

23 (d) The [relevant state agency] may decline, suspend, revoke, or decline to renew the
24 registration of an automated vehicle that is not an associated automated vehicle.

25 (e) The [relevant state agency] may decline, suspend, revoke, or decline to renew the
26 registration of an automated vehicle that is not properly maintained, not insured in accordance
27 with applicable law, not compliant with a registration requirement, or otherwise not fit to be
28 operated.

29 (f) If the [relevant state agency] declines, suspends, revokes, or declines to renew the
30 registration of an automated vehicle, the [relevant state agency] may grant a temporary

1 registration that applies to the vehicle only when it is not under automated operation.

2 (g) The [relevant state agency] may grant, maintain, or renew the registration of a motor
3 vehicle that is no longer an automated vehicle only if the registrant represents under penalty of
4 perjury to the [relevant state agency] that the vehicle cannot and will not be used under
5 automated operation on a [road open to the public].

6 (h) Registration of an automated vehicle does not create a presumption as to the safety of
7 the vehicle or its equipment.

8 **Legislative Note:** *If the state integrates this act into the general vehicle code, these provisions*
9 *should be codified in the vehicle registration section.*

10
11 **Legislative Note:** *This section applies to all persons that are required to register a vehicle under*
12 *state law. If the state requires or allows a motor vehicle to be registered by a person other than*
13 *the owner of the vehicle, references to “owner” should be modified accordingly. Existing rules*
14 *for determining whether a motor vehicle must be registered in this state also apply to automated*
15 *vehicles.*

16
17 **Legislative Note:** *The state may wish to modify language in this section to be consistent with*
18 *existing usage of the term “registration,” which, depending on the state, could refer either to a*
19 *request by a person to register a vehicle or to the issuance of that registration by the relevant*
20 *state agency.*

21
22 **Legislative Note:** *The state may wish to compare and reconcile the language in paragraph e*
23 *with similar language already used in the vehicle code.*

24
25
26

Comment

27 Section 5 and 6 are complementary with each other and with a state’s generally applicable rules
28 for motor vehicle registration. Under existing law, the owner (or lessor) of a motor vehicle must
29 generally register that vehicle with a particular state in accordance with that state’s place of
30 registration rules. The Automated Vehicles Act retains this same obligation for the owner (or
31 lessor) of an automated vehicle, who must likewise register the vehicle with the particular state.

32
33 This act also adds a new condition of registration: Under Section 5, the automated vehicle may
34 be registered only if an automated driving provider has designated the particular automated
35 vehicle as one of its associated automated vehicles under Section 6. The vehicle owner and the
36 automated driving provider may or may not be the same legal person. As long as the automated
37 vehicle is associated with an automated driving provider, its owner (which may or may not be
38 the same person) may register it just as that person would register a conventional motor vehicle.

39

1 If, however, an automated vehicle is not—or is no longer—associated with an automated driving
2 provider, then the owner may not register it and therefore may not use it on public roads. This
3 significant restriction under Section 5 incentivizes entities to act as automated driving providers
4 and designate associated automated vehicles under Section 6. A person is unlikely to buy an
5 automated vehicle that they are not allowed to actually use.

6
7 This act provides some flexibility to the state motor vehicle agency in applying this rule to
8 address situations where automated operation is temporarily or permanently imprudent or
9 impossible. If the agency suspends the registration of an automated vehicle, it may nonetheless
10 authorize the non-automated operation of that vehicle through a temporary license. If the owner
11 ensures and represents that automated operation is no longer possible, then the vehicle is no
12 longer an automated vehicle and may be registered consistent with generally applicable
13 registration requirements.

14
15 **SECTION 6. AUTOMATED DRIVING PROVIDERS AND ASSOCIATED**
16 **AUTOMATED VEHICLES.**

17 (a) To qualify as an automated driving provider, a person must:

18 (1) have participated in a substantial manner in the development of an automated
19 driving system;

20 (2) have submitted to the U.S. National Highway Traffic Safety Administration a
21 safety self-assessment or equivalent report for the automated driving system as required or
22 permitted by the U.S. National Highway Traffic Safety Administration; or

23 (3) be registered as a manufacturer of motor vehicles or motor vehicle equipment
24 pursuant to the requirements of the U.S. National Highway Traffic Safety Administration.

25 (b) A person is an automated driving provider only if the person declares itself under
26 penalty of perjury to be an automated driving provider.

27 (c) To declare itself to be an automated driving provider, a person must, in a form
28 acceptable to the [relevant state agency] and under penalty of perjury:

29 (1) represent that the person qualifies as an automated driving provider;

30 (2) represent that the person is capable of undertaking the responsibilities of an

1 automated driving provider;

2 (3) represent that sufficient evidence demonstrates that the automated driving
3 system of each associated automated vehicle is capable of complying with [this state’s rules of
4 the road];

5 (4) irrevocably appoint the [relevant state agency] as a lawful agent upon which
6 process may be served in an action arising from the automated operation of an associated
7 automated vehicle; and

8 (5) pay a fee specified by the [relevant state agency] for processing the automated
9 driving provider declaration.

10 (d)

11 **INTERNAL OPTION 1:** The [relevant state agency] may at any time investigate the
12 qualifications or representations of a person that declares itself to be an automated driving
13 provider and, based on that investigation, may decline to recognize the declaration;

14 **INTERNAL OPTION 2:** A person that declares itself to be an automated driving provider
15 has the burden of proving its qualifications and representations to the satisfaction of the [relevant
16 state agency]. The declarant must submit to an investigation ordered at any time by the [relevant
17 state agency], provide all information requested by the [relevant state agency], and pay the actual
18 costs that the [relevant state agency] incurs in the investigation. The recognition of a declaration
19 is a privilege and no declarant has any vested rights therein or hereunder.

20 (e) An automated vehicle is an associated automated vehicle only if so designated by an
21 automated driving provider.

22 (f) To designate an associated automated vehicle, an automated driving provider must
23 provide notice in a form acceptable to the [relevant state agency].

1 (g) An automated vehicle is an associated automated vehicle unless and until the
2 automated driving provider either dissolves or disassociates the automated vehicle.

3 (h) To disassociate an associated automated vehicle, the automated driving provider must
4 provide notice in a form acceptable to the [relevant state agency].

5 **Legislative Note:** *If the state integrates this act into the general vehicle code, these provisions*
6 *should be codified in a new section on automated driving providers and associated automated*
7 *vehicles.*

8
9 **Comment**

10
11 Section 5 of the Automated Vehicles Act provides that a person may register an automated
12 vehicle only if that vehicle is associated with an automated driving provider. Section 6 specifies,
13 first, how an entity declares itself to be an automated driving provider and, second, how that
14 entity then designates an automated vehicle to be an associated automated vehicle.

15
16 The potential diversity of automated driving compels a flexible definition of automated driving
17 provider. An automated vehicle’s automated driving system may be installed by the developer of
18 the system, the manufacturer of the vehicle, or another entity altogether. The vehicle may be
19 owned by a sophisticated technology company, by a fleet operator with some familiarity with
20 automation, or by an individual with no technical knowledge whatsoever. Regardless of
21 ownership, the continued safety of automated operation is likely to require the ongoing
22 involvement of a technically competent entity that facilitates data transfers, software updates,
23 and technical support. The automated driving provider concept recognizes that, in a functional
24 sense, automated vehicles will be driven not by individuals or even computers but by companies.

25
26 To become an automated driving provider, an entity must make an affirmative declaration that
27 includes specific representations. This means that, first, an entity does not become an automated
28 driving provider against its will and, second, not every entity can become an automated driving
29 provider. Paragraph a identifies three basic qualifications, one of which a provider must satisfy,
30 and paragraph c identifies additional requirements, all of which the provider must satisfy.

31
32 Among these, the automated driving provider must represent that sufficient evidence
33 demonstrates that the automated driving system of each associated automated vehicle is capable
34 of complying with the rules of the road. The entity need not provide this evidence in its initial
35 declaration, but the state motor agency may investigate, and other laws may provide a basis for
36 the state to prosecute an entity that misrepresents the existence or sufficiency of this evidence.
37 The phrase “sufficient evidence” is intended to provide flexibility to those automated driving
38 providers that act in good faith and consequences to those providers that act in bad faith. It may
39 be informed by other legal standards of proof and review that are familiar to courts and agencies.

40
41 To then designate its associated automated vehicles, an automated driving provider must provide
42 acceptable notice to the relevant state motor vehicle agency. This language was chosen over

1 more precise formulations to provide flexibility to these agencies, to avoid financial, technical, or
2 procedural burdens, and to facilitate without requiring cooperation among states and with the
3 federal government. A state might require notice directly from a provider, indirectly through the
4 vehicle registrant, or collectively through a public or private database, among other possibilities.
5 Once an automated driving provider has designated an associated automated vehicle, the
6 association remains until the provider either ceases to exist or affirmatively withdraws the
7 designation.
8

9 SECTION 7. EQUIPMENT.

10 (a) [This state’s vehicle code] must be interpreted to facilitate the development and
11 deployment of automated vehicles in a way that improves traffic safety.

12 (b) An automated vehicle must be properly maintained.

13 (c) A provision of [this state’s vehicle code] requiring equipment that is necessary only
14 for the performance of the dynamic driving task by a human driver or operator does not apply
15 with respect to a dedicated automated vehicle.

16 (d) A provision of [this state’s vehicle code] prohibiting an electronic device in a vehicle,
17 other than a device used to evade law enforcement, does not apply with respect to a dedicated
18 automated vehicle.

19 (e) A provision of [this state’s vehicle code] prohibiting an electronic device in a vehicle,
20 other than a device used to evade law enforcement, may not be enforced with respect to an
21 automated vehicle under automated operation.

22 **Legislative Note:** *If the state integrates this act into the general vehicle code, these provisions*
23 *should be codified in the equipment section.*
24

25 **Legislative Note:** *The state may wish to compare and reconcile the language in paragraph b*
26 *with similar language already used in the vehicle code.*
27

28 **Legislative Note:** *If the state codifies this act by integrating it into the vehicle code, the existing*
29 *vehicle code provisions addressed in paragraphs c, d, and e can be directly amended.*
30

31 Comment

32

1 Many state vehicle codes include provisions related to the equipment on motor vehicles. Most of
2 these provisions primarily contemplate the continued roadworthiness of individual motor
3 vehicles rather than the design of new motor vehicles. This section of the Automated Vehicles
4 Act is intended in part to clarify the application of these provisions to automated vehicles. In
5 contrast, the next section is intended in part to clarify the application of similar provisions to
6 these of these vehicles. For example, under this section, a prohibition on the installation of a
7 television screen visible from the driver’s seat would not apply in the case of a dedicated
8 automated vehicle (i.e., one that cannot be operated by a conventional human driver) and would
9 otherwise not apply in the case of an automated vehicle under automated operation. Under the
10 next section, a related but distinct prohibition on using such a screen would not apply during
11 automated operation. However, prohibitions on installing and using products intended to evade
12 law enforcement (such as radar detectors) would continue to apply.
13
14

15 **SECTION 8. RULES OF THE ROAD.**

16 (a) [This state’s rules of the road] must be interpreted to facilitate the development and
17 deployment of automated vehicles in a way that improves traffic safety.

18 (b) An automated driving provider must take reasonable steps to comply with [this state’s
19 rules of the road] during automated operation of an associated automated vehicle.

20 (c) An automated driving provider is responsible for a violation of [this state’s rules of
21 the road] by an associated automated vehicle under automated operation.

22 (d) An automated vehicle may not be operated on a [road open to the public] if the
23 vehicle is not properly maintained, not insured in accordance with applicable law, not compliant
24 with a registration requirement, or otherwise not fit to be operated.

25 (e) A prohibition under [this state’s vehicle code] on unattended or abandoned vehicles
26 does not apply to an automated vehicle under automated operation solely because an individual
27 is not in or near the vehicle, unless the vehicle is not lawfully registered, poses a risk to public
28 safety, or unreasonably obstructs other road users.

29 (f) A prohibition under [this state’s vehicle code] on leaving a child, an incapacitated
30 person, or a pet in a vehicle may apply to an automated vehicle even if the vehicle is under

1 automated operation.

2 (g) A restriction under [this state’s vehicle code] on the use of an in-vehicle electronic
3 device, other than a device used to evade law enforcement, does not apply during the automated
4 operation of an automated vehicle.

5 (h) A requirement under [this state’s vehicle code] that imposes a minimum following
6 distance other than a reasonable and prudent distance does not apply to the automated operation
7 of an automated vehicle.

8 **Legislative Note:** *If the state integrates this act into the general vehicle code, these provisions*
9 *should be codified in the section containing the rules of the road.*

10
11 **Legislative Note:** *The phrase “this state’s rules of the road” refers to state laws on the operation*
12 *of motor vehicles. These laws, which may be statutory or regulatory, are generally only one part*
13 *of the vehicle code.*

14
15 **Legislative Note:** *The state may wish to compare and reconcile the language in paragraph d*
16 *with similar language already used in the vehicle code.*

17
18 **Legislative Note:** *If the state codifies this act by integrating it into the vehicle code, the existing*
19 *vehicle provisions addressed in paragraphs e, f, g, and h can be directly amended. If the state*
20 *does not specify numerical minimums for following distance or following time, paragraph h may*
21 *be omitted.*

22

23

Comment

24

25 This section of the Automated Vehicles Act clarifies how a state’s rules of the road apply in the
26 context of automated driving. With respect to automated driving providers, it establishes two
27 important and complementary principles.

28

29 First, an automated driving provider must take reasonable steps to comply with the rules of the
30 road during automated operation of an associated automated vehicle. This prospective principle
31 requires an automated driving provider to act reasonably rather than to ensure absolute
32 compliance with the rules of the road, particularly when absolute compliance may not be
33 definable, achievable, or even desirable. It means, for example, that an automated driving
34 provider does not necessarily violate the vehicle code merely by deploying an automated vehicle
35 that is capable of crossing a double-yellow centerline or momentarily exceeding a speed limit in
36 the interest of safety. This is important because some rules of the road as written can be
37 contradictory, inconsistent with expected practice, and tempered through enforcement discretion.
38 An automated driving provider does not intend to violate these rules merely by declining to
39 unequivocally foreclose the possibility of violation.

1
2 Second, notwithstanding the first principle, an automated driving provider is responsible for a
3 violation of the rules of the road by an associated automated vehicle under automated operation.
4 This retrospective principle merely recognizes that the automated driving provider is the legal
5 driver in these circumstances and is therefore subject to corresponding sanctions under the
6 vehicle code. In other words, the automated driving provider should receive the speeding ticket
7 when an associated automated vehicle under automated operation is caught speeding. At the
8 same time, this section does not address the appropriate level of enforcement. It is expected that
9 federal, state, and local authorities will continue to evaluate the role of various forms of
10 automated enforcement (including self-reporting obligations) in improving road traffic safety.

11
12 This section also makes explicit the power of road authorities to remove automated vehicles that
13 may pose unreasonable risks to road safety. The language of paragraph d is similar to more
14 general language already included in the vehicle codes of some states.

15
16 Like the previous section, this section also clarifies how specific rules should be understood in
17 the context of automated driving. An automated vehicle is not unattended or abandoned merely
18 because it is unoccupied. Conversely, a young child left alone in a vehicle is unattended even
19 though that vehicle is under automated operation.

20
21 Finally, this section provides that a numerical minimal following-distance requirement does not
22 apply to the automated operation of automated vehicles. However, the common “reasonable and
23 prudent” following-distance requirement continues to apply. (Human drivers routinely violate
24 both requirements.) This paragraph h differs in scope from following-distance legislation enacted
25 in some states to facilitate the platooning of vehicles, particularly commercial trucks, that use
26 advanced technologies but may not necessarily qualify as automated vehicles.

27
28
29 **SECTION 9. INSURANCE.** This [act] does not displace other insurance requirements,
30 and insurance required under this [act] does not satisfy other insurance requirements.

31 *Legislative Note: This section is largely a placeholder. If the state integrates this act into the*
32 *general vehicle code, it should be included in a new section on automated driving generally.*

33 34 **Comment**

35
36 The Automated Vehicles Act is intended to facilitate and regulate automated driving in the
37 context of a state’s vehicle code—a scope that necessarily excludes many other important issues
38 of law and policy. Insurance falls into a tricky category. On one hand, it is not squarely within
39 the scope of this uniform act, and its inclusion would be difficult given the diversity and
40 complexity of state approaches to insurance generally and automotive insurance specifically. On
41 the other hand, insurance is close enough to the scope that the topic merits consideration as part
42 of a state’s potential adoption of this act. For these reasons, this comment briefly considers
43 insurance in the context of automated driving.

1 Existing frameworks for compensating injuries from vehicle crashes vary widely. Some states
2 start with a fault-based regime; others start with a no-fault regime. Almost every state requires
3 some mandatory insurance in some form, albeit at generally low levels, for crash injuries caused
4 or incurred. And states supervise the provision of automotive insurance, whether required or
5 optional, through complex regimes that involve varying regulatory interventions. Federal, state,
6 and local regimes address the insurance of commercial transportation services, and other forms
7 of insurance apply to commercial activities more generally.

8
9 Regardless of the details, automated operation could complicate many of the insurance
10 frameworks that are largely focused on vehicle owners and operators. A principal concern is that
11 current automotive insurance policies may not effectively compensate victims of crashes caused
12 by failures of automated driving systems. In a fault-based regime, for example, a victim may not
13 be able to identify any negligence by an individual covered by a third-party liability policy.
14 While products liability law may facilitate direct claims against the vehicle manufacturer or
15 automated driving system developer, these claims may be too expensive to bring for relatively
16 low-damage crashes. Arbitration agreements could further limit options for recovery. And some
17 automated vehicles might outlast the companies developing or deploying them.

18
19 These concerns, among others, inspired robust discussion about potential responses. The
20 automotive insurance industry might modify existing products and by creating new ones.
21 Insurers and other industry players might change their approaches to subrogation,
22 indemnification, or settlement. Regulatory action may or may not be necessary to facilitate,
23 catalyze, or compel these changes. Regardless, states might decide to modify their insurance
24 requirements or impose new ones on manufacturers, developers, owners, or insurers themselves.

25
26 These potential responses could implicate the concept of the automated driving provider. Earlier
27 drafts of this act included various possibilities, three of which are particularly illustrative. Under
28 the first, existing rules of insurance would continue to apply, with the expectation that rules
29 applicable to commercial passenger services (such as taxis and so-called transportation network
30 companies) would be increasingly relevant. Under the second, states would require automated
31 driving providers to carry specific insurance covering crashes caused by their associated
32 automated vehicles (or at least by failures of those vehicles). Under the third, states would
33 construe existing automotive insurance policies to cover automated driving providers as
34 additional insureds, just as those policies would cover other drivers authorized by the
35 policyholder.

36 37 38 **SECTION 10. VIOLATIONS.**

39 (a) A violation of this [act] is a violation of [this state's vehicle code] and does not
40 preclude liability under other laws.

41 (b) If an automated vehicle is registered in a jurisdiction other than this state, a person is
42 responsible for a violation of this [act] if the person would be responsible for a corresponding

1 violation in the jurisdiction in which the vehicle is registered.

2 **Legislative Note:** *If the state integrates this act into the general vehicle code, these provisions*
3 *should be codified in the penalties section or in a new section on automated driving generally.*
4

5 **Legislative Note:** *The state should adhere to its requirements and conventions for codifying*
6 *violations and punishments to ensure that they are legally enforceable.*
7

8 **Comment**

9
10 As discussed previously, the Automated Vehicle Act is intended in large part to map a state’s
11 existing vehicle code onto automated driving. Violations of this act accordingly constitute
12 violations of the vehicle code. They may also give rise to liability under other laws. For example,
13 a misrepresentation by an automated driving provider might constitute criminal fraud.
14

15 Uniform acts are generally drafted on the assumption of nationwide adoption. However, given
16 the frequently interstate nature of road traffic, this act necessarily contemplates harmonization
17 with states that have not adopted or have modified this act. In particular, if an automated vehicle
18 is registered in a state that does not require it to be associated with an automated driving
19 provider, then an adopting state can apply the law of that state in allocating responsibility for a
20 violation. This paragraph does not preclude the state from also allocating responsibility under
21 this act, but instead provides a backstop to increase enforcement options.
22
23

24 **SECTION 11. UNIFORMITY OF APPLICATION AND CONSTRUCTION.** In

25 applying and construing this uniform act, consideration must be given to the need to promote
26 uniformity of the law with respect to its subject matter among states that enact it.

27 **Legislative Note:** *If the state integrates this act into the general vehicle code, this provision*
28 *should be codified in a new section on automated driving generally.*
29

30 **SECTION 12. SEVERABILITY.** If a provision of this [act] or its application to a

31 person or circumstance is held invalid, the invalidity does not affect other provisions or
32 applications of this [act] which can be given effect without the invalid provision or application,
33 and to this end the provisions of this [act] are severable.

34 **Legislative Note:** *Include this section only if this state lacks a general severability statute or a*
35 *decision by the highest court of this state stating a general rule of severability.*
36

1 **Legislative Note:** *If the state integrates this act into the general vehicle code, this provision*
2 *should be codified in a new section on automated driving generally.*

3

4 **SECTION 13. EFFECTIVE DATE.** This [act] takes effect [...].