FINAL STATEMENT OF REASONS

1) The Update to the Initial Statement of Reasons

Changes to the initial statement of reasons:

Autonomous Vehicle Testing Surety Bond, form OL 317

At the time this document was published for comment, the form was under review by the Office of the Attorney General (AG). The form was subsequently approved by the AG's Office and was submitted to the Office of Administrative Law (OAL) as a File and Print Only action. The OAL file number is 2013-1202-05FP.

This form was posted on the Department's website for public viewing during the entire 45-day comment period. No comments were received related to this or any other form identified in this regulatory action.

Modified Regulatory Text

The department made amendments to the originally proposed text as a result of comments received during the comment period. The amendments create clearer provisions that ensure manufacturers will be able to apply for a testing permit with little difficulty. Additionally, the amendments provide greater clarity related to the disengagement reports that manufacturers are required to submit.

§ 227.02. Definitions.

Subsection (a) was amended to delete the words "or monitoring" from the definition of 'Autonomous mode' to ensure consistency with Vehicle Code section 38750(b)(2). The department determined it necessary to delete the words 'or monitoring' because such a vehicle does not have to be monitored to be considered in autonomous mode.

Subsection (f) amended the definition of 'Manufacturer' by citing Vehicle Code section 470, to clarify that a "person" can include more than a natural person. During the 45-day comment period, the department received comment objecting to the provision allowing a person who modifies a vehicle by installing autonomous technology, from being a manufacturer. In response to this comment, the department is amending the language to cite Vehicle Code section 470, which defines a person to include a natural person, firm, copartnership, association, limited liability company or corporation. This amendment added further clarity to the term manufacturer and ensure consistency with Vehicle Code section 38750, governing the autonomous technology more than the vehicles to which the technology is affixed.

§ 227.06. Evidence of Financial Responsibility.

Section 227.06 was amended to delete verbiage related to a driver, owner, or operator providing proof or evidence of financial responsibility pursuant to Division 7 of the

Vehicle Code. Instead, the department is specifying that financial responsibility, as required by Vehicle Code section 38750, is in addition to any other insurance obligation required by law. Due to a perceived ambiguity of the proposed text, the department changed the language to require financial responsibility, required by Vehicle Code section 38750, in addition to any other insurance obligation.

§ 227.14. Certificate of Self-Insurance.
Subsection (c) was amended to add the word 'final' when referencing unsatisfied judgments, for added clarity.

§ 227.26. Manufacturer's Testing Permit Application.
Subsection (a)(2) was amended to correct the incorrect provision that states a supplemental application, plus fee, may be submitted for each set of 1 to 10 drivers and 1 to 20 vehicles. After internal discussion, the department determined that the supplemental application, plus fee, will allow an additional set of 1 to 10 vehicles and 1 to 20 drivers.

§ 227.40. Suspension of Autonomous Vehicle Testing Permit.
Subsection (a)(1) was amended to add sections 227.08 and 227.14 as citations when requiring the maintenance of financial responsibility.

§227.46. Reporting Disengagement of Autonomous Mode.
Subsection (a) was amended to provide greater clarity of the word 'disengagement'.

During the 45-day comment period, the department received comments related to the reporting of disengagements. Commenters suggested that the originally proposed text was ambiguous and questioned which kind of situations would require reporting. The Volkswagen Group of America submitted written comment also recognizing the text as ambiguous, and provided alternative language that provided necessary clarification needed in this section. The amended section defines 'disengagement' to mean a deactivation of the autonomous mode when a failure of the autonomous technology is detected and requires the driver to take immediate manual control of the vehicle. This clarification is necessary to ensure that manufacturers are not reporting each common or routine disengagement.

Subsection (b)(1) adopts reporting time frames. The department received comments requesting more direction related to the amount of time each report is to encompass as well as the deadline for submitting the reports on an annual basis. Subsection (b)(1) requires the first report to cover the period from the date of permit issuance to November 30 of the following year. Subsection (b)(2) requires subsequent reports to cover December 1 of the current year to November 30 of the following year. Subsection (b)(3) requires a summary of each disengagement. The total number of disengagements and the circumstances or testing conditions at the time of the disengagement, as specified in subsection (b)(3)(A). While the department recognizes that the technology can disengage for a number of reasons, this information is still critical for the department to evaluate the

ongoing safety improvements being made to this technology. This provision is necessary to provide manufacturers an opportunity to report the circumstances in which the disengagement occurred, but also allow the department to see how the safety measures are advancing.

Subsection (b)(3)(A)(i) requires each report to include location attributes such as interstate, freeway, highways, etc. This information is necessary for the department to track whether certain autonomous technologies are able to maneuver specified locations. Subsection (b)(3)(A)(ii) requires each report to include a description of the facts causing the disengagement, including weather conditions, surface conditions, construction, etc.

In comments received during the 45-day comment period, as well as at the public hearing, there was a consensus among the manufacturers that giving the amount of disengagements, without the circumstances that lead to the disengagement, carries little value. This provision will allow the manufacturers to provide a detailed account of the disengagement and allow the department to track the technology as it progresses. For instance, if the technology disengages in a parking facility more often than on a freeway, or if a vehicle is continually unable to maneuver in the snow, the department will be better equipped to track that technology as it progresses.

Subsection (b)(3)(B) requires each report to indicate the total number of miles each vehicle tested in autonomous mode on public roads each month. This amendment gives the department context as to the amount of miles driven between disengagements.

Subsection (b)(3)(C) requires each report to include the period of time elapsed from when the autonomous vehicle test driver was alerted of the technology failure and the driver assumed manual control of the vehicle. As in subsection (b)(3)(A) above, this report requirement will allow the department to track the safety of the disengagements to ensure sufficient time is allotted to the driver in instances where a technology failure requires the driver to take control of the vehicle.

2) Imposition of Mandate on Local Agencies or School Districts

The Department's regulatory action adopting Sections 227.00, 227.02, 227.04, 227.06, 227.08, 227.10, 227.12, 227.14, 227.16, 227.18, 227.20, 227.22, 227.24, 227.26, 227.28, 227.30, 227.32, 227.34, 227.36, 227.38, 227.40, 227.42, 227.44, 227.46, 227.48, 227.50 and 227.52 of Article 3.7, Title 13, does not impose any mandate on local agencies or school districts and imposes (1) no cost or savings to any state agency, (2) no cost to any local agency or school district that is required to be reimbursed under Part 7 (commencing with Section 17500) of Division 4 of the Government Code, (3) no other discretionary cost or savings to local agencies, and (4) no cost or savings in federal funding to the state. No studies or data were relied upon to make this determination.

3) Potential for Adverse Economic Impact on California Business Enterprises (Government Code section 11346.3)

The department has determined that these regulations will not have an adverse economic impact on California business enterprises and individuals. This action imposes reporting requirements, specifically, reporting the disengagements of the autonomous technology. This report is necessary as it allows the department to track the progression of the manufacturers technology and allows the department to ensure the autonomous vehicles continued safety.

The department is promulgating these regulations as required by Vehicle Code section 38750 to ensure the safe operation of autonomous vehicles on public roads, with or without the presence of a driver inside the vehicle.
The department has further determined that this action will not impact the ability of California business to compete with businesses in other states. Several other states authorize the testing of autonomous vehicles.

4) List of Entities that Submitted Comment During the 45-Day Comment Period and Public Hearing

The proposal was noticed on November 29, 2013, and made available to the public from November 29, 2013 through January 13, 2014. The following individuals provided comments in letters received by the Department through **electronic mail**:

Id No.	Comment Submitted	Name of Commenter	Title	Company/Location
E-1	12/16/13	Steven Tiell	Private	
E-2	12/20/13	Marjorie Tepina	Senior Policy Advisor	Vehicle Programs Office Ministry of Transportation
E-3	1/6/14	Robert W. Peterson	Director, Center for Insurance Law and Regulation	Santa Clara University Santa Clara, CA
E-4	1/10/14	Nicole Barranco	Director, State Government Relations	Volkswagen Group of America Herndon, VA
E-5	1/13/14	Steve Fox	Assemblymember, 36th District	Capitol Office Sacramento, CA
E-6	1/13/14	Howard A. Lenox	Regional Director	General Motors Corporation Sacramento, CA
E-7	1/13/14	Edward S. Lowry	Private	Bedford, MA
E-8	1/13/14	John Frooshani	Safety Activities Manager	Government Relations Subaru of America
E-9	1/13/14	Alex Cardinali	Manager, Safety and ITS Government Affairs	Nissan North America, Inc. Franklin, TN
E-10	1/13/14	Ron Medford	Director of Safety, Self-Driving Car	Google, Inc. Mountain View, CA

			Program	
E-11	1/13/14	Michael Harrison-Ford	Chief Strategic Officer	Zoox Pty. Ltd. Melbourne, AU
E-12	1/13/14	Armand Feliciano	Vice President	Association of California Insurance Companies (ACIC) Sacramento, CA
E-13	1/13/14	Steven Siko	Program Manager Advanced Safety	Chrysler Group, LLC Auburn Hills, MI
E-14	1/13/14	David Agnew	Technology Strategy & Research	Continental Automotive Systems, Inc. Auburn Hills, MI

The following individual provided comments in letters **personally delivered** to the Department at its headquarters address:

ID No.	Comment Submitted	Name of Commenter	Title	Company/Location
PS-1	1/13/14	John Tillman	Manager, Regulatory Affairs	Mercedes-Benz Research & Development Sacramento, CA

A public hearing was held on January 14, 2014 at 10:00 a.m. at the Department of Motor Vehicles' headquarters Assembly Room. The following interested parties appeared and presented comment at the public hearing:

ID No.	Name of Commenter	Title	Company/Location
H-1	Armand Feliciano	Vice President	Association of California Insurance Carriers (ACIC) Sacramento, CA
H-2	Nicole Barranco	Director	Volkswagen Group of America Herndon, VA
H-3	Ron Medford	Director of Safety, Self-Driving Car Program	Google, Inc. Mountain View, CA

5) Comments Received During the 45-Day Comment Period and Public Hearing with the Department's Responses

Comments received during the 45-day comment period and at the public hearing are being responded to by commenter.

Commenter: E-1
Steven Tiell

Mr. Tiell's letter discusses the future of automated vehicles. The letter does not directly reference any provision of the proposed regulatory text, therefore, the Department is unable to respond to any portion of the commenter's letter.

Commenter: E-2
Marjorie Tepina
Senior Policy Advisor
Vehicle Programs Office
Ministry of Transportation

General Questions
Is California planning to have a water mark on the registration card, if so what will it say? Also are registration cards for autonomous vehicles going to be a different color than other passenger vehicles, if so what color?

- *Department's Response: The registration card issued to a vehicle equipped with autonomous technology will not have a water mark nor will the card be a different color.*

Is the certificate of ownership going to be a different color? If so what color?

- *Department's Response: The certificate of ownership will not be a different color.*

Is the AVT permit going to be required to be placed in the front windshield? If not where would it go?

- *Department's Response: The regulations do not specify where in the vehicle the permit is to be located.*

Commenter: E-3
Robert W. Peterson
Director of the Center for Insurance
Law and Regulation
Santa Clara University
Santa Clara, CA

Section 227.12 – Proof of Financial Responsibility

A CHP office will not know what to make of a bond presented as proof of financial responsibility.

- *Department's Response: Vehicle Code section 38750(b)(3) specifies that a bond is an acceptable from of insurance for the testing of autonomous vehicles. Vehicle Code sections 16028 and 16054 specify that a bond may be presented as proof of financial responsibility. The proposed regulation is consistent with existing provisions of law.*

Section 227.18 – Requirements for Autonomous Vehicle Test Drivers

The regulation borrows the standards for "good drivers" from Proposition 103 (Insurance Code section 1861.025) and uses them as a trigger for disqualifying a test driver. These provisions are not in Vehicle Code section 38750 and have been added by the DMV on its own initiative.

- *Department's Response: The requirements for a test driver mirror the definition of a "good driver" found in the Insurance Code. With the Passage of Proposition 103 in 1988, the citizens of California have made a determination that people who meet the criteria specified in Section 227.20 are the safest drivers. The definition ensures that the test driver meet the public's expectation that the vehicles are entrusted to the safest drivers. Vehicle Code section 38750(d)(1) and (2) gives the Department the authority to include testing standards that it "concludes are necessary to ensure the safe operation of autonomous vehicles on public roads." The Department has concluded that requiring the test drivers to be "good drivers" is necessary to ensure the safe operation of autonomous vehicles on public roads.*

Section 227.18(c) requires the autonomous vehicle test driver to obey all laws whether the vehicle is in autonomous or conventional mode. Section 227.20 (b)(1)(A) and (B) requires a manufacturer to certify that in the prior three years an autonomous vehicle test driver has not had more than one violation point and was not the at-fault driver in an accident that resulted in bodily injury or death. Suggests that Section 227.20 (b)(1)(A) and (B) be confined to violations or accidents when the vehicle was under the full manual control of the driver.

- *Department's Response: Vehicle Code Section 38750 (b)(2) requires that a test vehicle be operated by an employee of the manufacturer who is "seated in the driver's seat, monitoring the safe operation" of the vehicle. In consultations with the California Highway Patrol, the Department determined that "safe operation of the vehicle" necessarily includes obeying all provisions of the Vehicle Code; consequently, the driver of the test vehicle, while operating the vehicle, would have to insure that the vehicle obeys all traffic laws at all times, regardless of whether it is in autonomous mode or conventional mode. The suggested revision is contrary to the specific language and intent of the statue.*

Section 227.20 – Autonomous Vehicle Test Driver Qualifications

The application of a "good driver standard" to autonomous vehicle test drivers is unfair. The good driver standard is an insurance concept related to the risk of exposure to loss caused by driving. Autonomous vehicle test drivers may log thousands of additional miles per year thus raising the risk that they will suffer a loss. The good driver concept was not intended to apply to test drivers . The DMV proposal does not track the Department of Insurance's scenarios where a driver is presumed not to be "the principally at-fault" driver.

- *Department's Response: The reason why good driver's, regardless of how many miles they drive, receive a "good driver" discount is because they have the driving characteristics that the people of the state of California in enacting Proposition 103 determined to be the characteristics of the safest drivers on California's public roads. As a measure of risk, those characteristics determine who are our safest drivers. Vehicle Code Section 38750 (d)(3) authorizes the department to establish additional requirements that it determines are necessary to ensure the safe operation of autonomous vehicles on public roads. Ensuring that test drivers meet the accepted definition of the safest drivers is consistent with the clear language of Vehicle Code Section 38750. The term "at-fault" in automobile accidents has become synonymous with "principally at-fault," meaning the party more responsible for the accident. While the DMV proposal does not adopt the regulatory language already adopted by the Department of Insurance, the use of "at-fault" is consistent with the accepted meaning of that term for the purposes the attribution of fault in an accident. Additionally, fault is determined by either an insurance company adjuster or law enforcement.*

Delete the good driver requirement and add a requirement holding manufacturer's strictly liable for the injuries caused by their vehicles.

- *Department's Response: Vehicle Code Section 38750 (d)(3) authorizes the department to establish additional requirements that it determines are necessary to ensure the safe operation of autonomous vehicles on public roads. Ensuring that test drivers meet the accepted definition of the safest drivers is consistent with the clear language of Vehicle Code Section 38750. A strict liability standard for manufacturers would absolve drivers of their statutory obligation to monitor the safe operation of the vehicle by free them of any responsibility for the accidents that occur under their watch.*

Delete the "good driver" standard and either: limit it to incidents that occur while the vehicle is in manual mode; or, limit the incidents to those that a person who drives a set number of miles over a specified period of time.

- *Department's Response: The good driver standard is an accepted standard that reflects a determination of who are the safest drivers on public roads. As the testing regulations govern the safe operation of experimental vehicles on public*

roads, Vehicle Code Section 38750 requires the department to ensure that they are operated safely; consequently, the department has determined that requiring drivers to meet the accepted definition of the safest drives on the public roads is consistent with the requirements of Section 38750. Limiting incidents to manual mode is inconsistent with the statutory requirement that the driver monitor the safe operation of the test vehicle at all times. Limiting the standard to an arbitrary set of miles for an arbitrary period of time is not supported by research and is inconsistent with the accepted standards for a safe driver.

Section 227.24 – Manufacturer's Testing Program
The regulation does not quantify how "safe" a vehicle must be to be operated on public streets.

- *Department's Response: The federal scheme for the regulation of vehicle safety relies on self-certification by manufacturers. The proposed regulation is consistent with the federal regulatory scheme for vehicle safety certification.*

Section 227.46 – Reporting Disengagement of Autonomous Mode
The reports of disengagement should be limited to incidents where intervention is necessary to avoid danger to the public.

- *Department's Response: This section has been revised to clarify the situations in which a disengagement caused by a failure of the autonomous technology must be reported.*

Commenter: E-4, H-2
Nicole Barranco
Director of State Government Relations
Volkswagen Group of America
Herndon, VA

Section 227.02 – Definitions
The definition of autonomous vehicle test driver conflicts with the requirement that the test driver be either in immediate physical control of the vehicle or actively monitoring the operation of the vehicle and capable of taking control. The definition restricts the test driver to being in the driver's seat. Suggests that the restriction on being in the driver seat be deleted.

- *Department's Response: The Department does not agree that the definition of autonomous vehicle test driver in this section is inconsistent with the requirement that the driver be in physical control of the vehicle or actively monitoring its operation. The restriction that the test driver be in the driver's seat is required by Vehicle Code section 38750 (b)(2).*

Section 227.20 – Autonomous Vehicle Test Driver Qualifications

The requirement that a test driver not have more than one point does not translate to violations that occur in other jurisdictions and manufacturers have incentives to ensure that expensive test vehicles are entrusted only to qualified drivers. The requirement should be eliminated.

- *Department's Response: The Department has been a member of the Driver's License Compact (Vehicle Code section 15000) for the past 50 years. The Compact requires the Department to recognize violations that occur in other jurisdictions. The requirements for a test driver mirror the definition of a "good driver" found in the Insurance Code. With the Passage of Proposition 103 in 1988, the citizens of California have made a determination that people who meet the criteria specified in Section 227.20 are the safest drivers. The definition ensures that the test driver meet the public's expectation that the vehicles are entrusted to the safest drivers.*

Section 227.44 – Reporting Accidents

The reporting of accidents involving autonomous vehicles should only be required when the vehicle was operating in autonomous mode. DMV should specify a minimum threshold for the reporting of accidents that involve damage to property.

- *Department's Response: The National Highway Safety Administration (NHTSA), the federal organization charged with setting (Federal Motor Vehicle Safety Standards (FMVSS), issued a "Preliminary Statement of Policy Concerning Automated Vehicles" on May 30, 2013, which recommends that states establish reporting requirements to monitor the performance of self-driving technology during testing. NHTSA has recommended that states require the reporting of "incidents in which a self-driving vehicle, while operating or transitioning out of self-driving mode, is involved in a crash or near crash." The commenter's suggestion is inconsistent with the recommendation of NHTSA and would not capture accidents where the vehicle was transitioning from autonomous mode. Moreover the reporting of accidents when the vehicle is not in autonomous mode will provide a baseline for evaluation of the frequency of accidents involving autonomous vehicles. Setting a threshold for property damage accidents would not capture all accidents involving autonomous vehicles.*

Section 227.46 – Reporting Disengagement of Autonomous Mode

The section could be interpreted to require reporting of every disengagement of the autonomous technology. To clarify that DMV only intends to capture disengagements that were unplanned or unexpected, the section should state that manufacturers must report unplanned or unexpected disengagements in circumstances when the safe operation of the vehicle requires the disengagement.

- *Department's Response: This section has been revised to clarify the situations in which a disengagement caused by a failure of the autonomous technology must be reported.*

Section 227.48 – Vehicle Registration and Certificates of Title
The requirement that an autonomous vehicle shall not be moved or left standing on a public road unless it has been identified to the DMV would apply even when the automated system is not engaged. A manufacturer should be allowed to drive, move or leave an autonomous vehicle standing on public roads when the autonomous technology is not engaged without having to notify the DMV.

- *Department's Response: This section mirrors the general requirement that a vehicle shall not be moved or left standing on a public road unless it is properly registered with the Department. All autonomous vehicles that will be operated in California must be identified to the Department prior to the issuance of a testing permit; this requirement applies whether the vehicle is in autonomous mode or not.*

Section 227.52 – Vehicles Excluded from Testing
The prohibition on the testing of commercial vehicles should be removed. If DMV has safety concerns with respect to testing commercial vehicles it should specify additional regulatory requirements applicable to these vehicles.

- *Department's Response: The Department believes that the testing of commercial vehicles on public roads involves safety, driver training, and driver qualification issues that should be addressed by a separate rulemaking proceeding.*

Subsection (b), as written, would forbid any commercial vehicle from being operated in the state "as a vehicle for hire or carry or transport a load for hire." The restriction is inapproporiately included in these regulations, which apply only to test vehicles equipped with an automated driving system and not to vehicles offered for sale to the general public. VWGoA recommends that this subsection be deleted.

- *Department's Response: The department agrees and has deleted subsection (b).*

Commenter: E-5
Assemblymember Steve Fox
36th District

The regulations should allow the testing of buses. Inclusion of buses would create jobs in the 36th Assembly district.

- *Department's Response: The Department believes that the testing of commercial vehicles on public roads raises heightened safety, driver training, and driver qualification issues that should be addressed by a separate rulemaking proceeding.*

Commenter: E-6

Howard A. Lenox
Regional Director
General Motors Corporation
Sacramento, CA

Section 227.02 – Definitions
"Any monitoring" should be included in the definition of autonomous mode. An "autonomous vehicle" should be defined has having "the capability to replace the active physical control or any monitoring…" The definition of designee should delete reference to the requirement that the designee be identified by the manufacturer to the DMV as authorized to test drive an autonomous vehicle.

- *Department's Response: The Department has deleted the word monitoring because Vehicle Code section 38570(b)(2) requires that a driver be seated in the driver's seat of an autonomous vehicle "monitoring the safe operation of" the vehicle. The language used in this section is consistent with the language of section 38750.*

The phrase "in autonomous mode" should be added to sections 227.04, 227.16, 227.24, 227.26, 227.34, 227.40, 227.42, 227.44, and 227.48 because the vehicles are often moved while in "conventional mode" such as when being transported.

- *Department's Response: The suggested addition is not necessary. The regulations deal with the testing of autonomous vehicles on public streets, the movement of vehicles while being transported does not involve testing.*

Section 227.14 – Certificate of Self-Insurance
Audited financial information is publicly available for a company like GM and the Department should use that information.

- *Department's Response: An applicant for a permit should provide all documentation necessary for the Department to issue the permit. The Department should not have to initiate a search of information from secondary sources for information that is easily accessible to the applicant.*

Sections 227.18, 227.20, and 227.22 – Test driver qualifications)
A person that is licensed to drive and who has met a manufacturer's test driver protocols should be allowed to be a test driver. The requirements of the regulations impose significant IT and head count burdens on GM.

- *Department's Response: The regulations allow a licensed driver who has been trained by a manufacturer to be a test driver. The commenter does not explain what "significant IT" burdens are imposed by the regulation; moreover, a manufacturer should know how many test drivers it employs to operate its test vehicles.*

Section 227.24 – Manufacturer Testing Permit
The permit should be valid for multiple years.

- *Department's Response: The issuance of permits to allow the testing of autonomous vehicles on public streets is a new program and the Department expects that manufacturers will have changes in the technology being tested as the technology is modified and matures that will need to be considered in the permitting process. The Department would not be able to address those changed circumstances if the permit were issued for longer periods.*

Section 227.46 – Reporting Disengagements of Autonomous Mode
The annual reporting requirement is burdensome.

- *Department's Response: Manufacturers will have to certify that the autonomous technology meets Federal Motor Vehicle Safety Standards (FMVSS) before the vehicles can be operated by members of the public (Vehicle Code section 38750(c)(1)(E)). The National Highway Safety Administration (NHTSA), the federal organization charged with setting FMVSS, issued a "Preliminary Statement of Policy Concerning Automated Vehicles" on May 30, 2013, which recommends that states establish reporting requirements to monitor the performance of self-driving technology during testing. The annual reporting requirement in the regulation follows NHTSA's recommendation: "To expand the body of data and support research concerning self-driving vehicles, states are encouraged to require businesses testing self-driving vehicles to submit to the state certain information, including instances in which a self-driving vehicle, while operating in or transitioning out of self-driving mode, is involved in a crash or near crash; and incidents in which the driver of one of their self-driving vehicles is prompted by the vehicle to take control of the vehicle while it is operating in the self-driving mode because of a failure of the automated system or the inability of the automated system to function in certain conditions." (Emphasis added.)*

Commenter E-7
Edward S. Lowry
Bedford, MA

Adoption of the regulations should be delayed until modifications are made to assure software safety. Delays in marketing computer language technology that is reasonably simple and safe stems from incentives to keep software complicated, profitable, and dangerous. Understanding the simplicity in software will make it practical for government to create reasonable policies and regulations associated with software language technology. The urgent next step is to assure that the State has access to visible competence is expressing software simplicity.

- *Department's Response: Vehicle Code section 38750 requires the Department to enact regulations by January 1, 2015.*

Commenter: E-8
John Frooshani
Safety Activities Manager
Government Relations
Subaru of America

Section 227.02 – Definitions
Third parties should not be allowed to retrofit vehicles with autonomous technology; the definition of manufacturer should be limited to vehicle manufacturers.

- *Department's Response: This suggestion is inconsistent with the definition of "manufacturer" in Vehicle Code section 38750(a)(5) which specifically includes parties that modify a vehicle by "installing autonomous technology to convert it to an autonomous vehicle after the vehicle was originally manufactured."*

Section 227.20 – Autonomous Vehicle Test Driver Qualifications
Would drivers who do not have a U.S. DL be allowed to be test drivers?

- *Department's Response: The section does not prohibit drivers who do not have a license issued in the United States.*

Section 227.24 – Manufacturer's Testing Permit
What are the minimum requirements for prior testing under controlled conditions before a manufacturer is issued a testing permit?

- *Department's Response: The type of prior testing is dependent on the type of autonomous technology being tested. The manufacturer of the technology is guided by safe business practices to ensure that they do not operate a vehicle on public streets until they are satisfied that they have completed sufficient testing under controlled conditions to ensure the safe operation of their test vehicles. The Department is giving manufacturers the flexibility to design their testing programs to meet the needs of the technology they are developing.*

Section 227.34 – Prohibitions on Operating on Public Roads
Would anyone with a DL be allowed to operate a vehicle when it is in conventional mode? Autonomous vehicles should have a visual indicator on the outside when it is being operated in autonomous mode.

- *Department's Response: Vehicle Code section 38750 (b) states that an autonomous vehicle can be operated on public roads for testing solely by an employee, contractor, or designee of the manufacturer. The commenter does not*

provide any reason why a visual indicator on the outside of an autonomous vehicle will increase safety.

Vehicle Code Section 38750 (a)(2)(A) defines an "autonomous vehicle" as "any vehicle equipped with autonomous technology that has been integrated into the vehicle." The regulation limits the operation of autonomous vehicle on public roads, whether in conventional mode or autonomous mode, to autonomous vehicle test drivers because the vehicle's autonomous technology can be easily activated by a driver at any time. Limiting the operation to qualified test drivers eliminates the possibility that the autonomous technology would be activated by driver that does not meet the test driver standards.

Section 227.46 – Reporting of Disengagement of Autonomous Mode
What kind of situations would require the reporting of disengagements?

- *Department's Response: This section has been revised to clarify the situations in which a disengagement caused by a failure of the autonomous technology must be reported.*

Section 227.50 – Transfers of Interest or Title
If a vehicle is only going to be displayed, a transfer other than just to an educational or research institution should be allowed.

- *Department's Response: Limiting who a vehicle can be transferred to ensures that experimental technology will not be operated on the streets by untrained drivers.*

Commenter: E-9
Alex Cardinali
Manager of Safety and ITS Government Affairs
Nissan North America, Inc.
Franklin, TN

Section 227.46 – Reporting Disengagements of Autonomous Mode
The period of time covered by the annual report is not specified, the regulation should allow lead time between the reporting period and the deadline for submission.

- *Department's Response: This section has been revised to clarify the situations in which a disengagement caused by a failure of the autonomous technology must be reported.*

Section 227.48 – Vehicle Registration and Certificates of Title
Nissan can provide a brief description of the autonomous functions integrated into a vehicle but it may not be acceptable to disclose specific information on the vehicle operations in a document that is not confidential.

- *Department's Response: Government Code section 6252(e) defines a "public record" as any "writing containing information relating to the conduct of the public's business prepared, owned, used, or retained by any state or local agency." Government Code section 6253(a) states that "public records are open to inspection at all times during the office hours of the state…and every person has a right to inspect any public record except, as hereafter protected." Government Code section 6254 exempts certain records from disclosure. The Department will deem information confidential to the extent it is exempt from disclosure by Government Code section 6254.*

Commenter: E-10, H-3
Ron Medford
Director of Safety
Self-Driving Car Program
Google, Inc.
Mountain View, CA

Section 227.02 – Definitions
The definition of "autonomous vehicle" is inconsistent with the definition that stakeholders lobbied for in SB 1298 and should mirror the definition in Vehicle Code section 38750(a)(2). The definition of "autonomous technology" should use the same language that is in Vehicle Code section 38750(a)(1). The definition of "autonomous test driver" is not consistent with Vehicle Code section 38750 (b)(2).

- *Department's Response: The Department cannot base its regulation on what "stakeholders lobbied for" with the Legislature. The definitions in this section are based on, and consistent with, the definitions in the statute actually enacted by the Legislature. Government Code section 11349.1 specifies that the Office of Administrative Law shall review all regulations and make its approval determination based on several standards – one of which is "nonduplication." Government Code Section 11349(f) explains that the nonduplication standard is intended "to prevent the indiscriminate incorporation of statutory language in a regulation." The definitions provided in the regulation are strictly based on the definitions, while not verbatim, provided in Vehicle Code Section 38750. The Department rejects this comment.*

Section 227.08 – Instrument of Insurance
The section needs to clarify that the insurance is for testing vehicles and not for vehicles sold or leased by the manufacturer.

- *Department's Response: Clarification is not necessary, since the section specifically states that a "manufacturer may satisfy the requirement of Vehicle*

Code section 38750 (b)(3)." Section 38750 (b)(3), referenced in the regulation, clearly states that the insurance is required prior to the start of testing. No further clarification is necessary.

Subsection (e) should be amended to clarify that the insurance policy required for testing meets the statutory requirements specific to testing so as to read, "(e) The insurer certifies that the policy meets the requirements of Vehicle Code section 38750(b)(3).

- *Department's Response: Section 227.08(e) already specifies that the insurance policy meet the requirements of Vehicle Code Section 38750. Vehicle Code Section 38750 has two financial responsibility requirements, one for testing that allows the submission of an instrument of insurance, and one for general operation of autonomous vehicles that does not allow the submission of an instrument of insurance. Since Section 227.08 only deals with the submission of an instrument of insurance for testing, the general citation to Vehicle Code Section 38750 is sufficient.*

Section 227.12 – Proof of Financial Responsibility
The requirement that proof of insurance be kept in the vehicle should be clarified to apply only to testing.

- *Department's Response: Vehicle Code section 16028 (a) states "every person who drives a motor vehicle upon a highway shall provide evidence of financial responsibility for the vehicle that is in effect at the time" a demand for proof of financial responsibility is made by a peace office. The requirement to provide proof of financial responsibility exists regardless of whether the vehicle is being tested or not.*

Section 227.14 – Certificate of Self-Insurance
The section should clarify that it applies to testing and that unsatisfied judgments that are on appeal are not disqualifying.

- *Department's Response: The commenter has repeatedly failed to recognize that the regulations govern the requirements for the testing of vehicles. The suggested clarification is unnecessary. The Department has revised the section to clarify that it applies to "final" judgments.*

Section 227.16 – Identification of Autonomous Vehicles
Subsection (a) should be modified to clarify that this provision relates only to the testing of autonomous vehicles.

- *Department's Response: The regulations govern the testing of autonomous vehicles on public roads and require manufacturers to obtain a permit to conduct that testing. Subdivision (a) requires a manufacturer to identify all autonomous vehicles to be used for testing to the Department. Further clarification is not necessary.*

Section 227.18 – Requirements for Autonomous Vehicle Test Drivers
The language in subdivision (a) should be changed to be consistent with Vehicle Code section 38750 (b)(2) by deleting the words "actively," replacing "physical" with "manual," and adding "of the vehicle in the event of an autonomous technology failure or other emergency."

- *Department's Response: The language of this subdivision is not inconsistent with the statute and does not expand the scope of the statute. The suggested revisions are unnecessary.*

Section 227.20 – Autonomous Vehicle Test Driver Qualifications
The requirements for test drivers are overly stringent and would prohibit people who have been involved in minor accidents from being test drivers. There should be flexibility to allow manufacturers to let dignitaries to operate the vehicles on public streets.

- *Department's Response: The requirements for a test driver mirror the definition of a "good driver" found in the Insurance Code. With the Passage of Proposition 103 in 1988, the citizens of California have made a determination that people who meet the criteria specified in Section 227.20 are the safest drivers. Google is also leasing 60 acres of land at the Castle Commerce Center in Merced County to, according to a Google spokesperson, "develop and refine the (autonomous) technology in a variety of environments, including closed tracks where we can set up challenging courses and obstacles…" Google will have a test facility where they can demonstrate the technology to dignitaries.*
    - Patton, V. and Giwargis, R. (January 24, 2014). "Google set to lease Castle site for self-driving car program." Merced Sun-Star. Retrieved February 18, 2014, from http://www.mercedsunstar.com.

Section 227.22 – Autonomous Vehicle Test Driver Training Program
The list of instruction is vague and will lead to confusion on whether a driver's experience is adequate for the technical maturity of the system being tested. The intent of subdivision (c) is already met is subdivision (a).

- *Department's Response: The section requires that a manufacturer provide a copy of its test driver training program to the Department and that the program include instruction on the system by a driver who has developed skill and knowledge of the technology. Section (c) is not covered by section (a) because section (c) requires that the driver be trained in the operation of the specific type and level of maturity of the autonomous technology being tested on the public roads.*

Section 227.24 – Manufacturer's Testing Permit
Controlled conditions for testing should include computer simulations.

- *Department's Response: The commenter fails to recognize that the regulations govern the testing of autonomous vehicle on public roads. Vehicle Code Section 38750 (b). Testing on public roads is not testing by computer simulation. The section does not prohibit testing on computer simulators.*

Section 227.28 – Review of Application
The Department should be required to approve a testing application within 60 days of determining that it is complete.

- *Department's Response: The comment does not provide any rationales as to why there must be a time period for the approval of an application. The section already provides a notification whether the application is complete and an opportunity to correct deficiencies in the application. Specifying a time in which the application must be approved will impede the ability to review and approve applications that have been resubmitted after correction of a deficiency.*

Section 227.30 – Term of Permit
The term of the testing permit should be increased to two years.

- *Department's Response: The issuance of permits to allow the testing of autonomous vehicles on public streets is a new program and the Department expects that manufacturers will have changes in the technology being tested as the technology is modified and matures that will need to be considered in the permitting process. The Department would not be able to address those changed circumstances if the permit were issued for longer periods.*

Section 227.34 – Prohibitions on Operation on Public Roads
The prohibitions should apply only to testing purposes as opposed to sales and leasing.

- *Department's Response: The regulations relate to the testing of autonomous vehicles. The requirements for sales or leasing of autonomous vehicles are the subject of regulations that are currently under development.*

Section 227.44 – Reporting Accidents
The reporting of accidents should be limited to when the vehicle is in autonomous mode, reporting of accidents when the vehicle is in conventional mode is already required if they meet the thresholds in Vehicle Code Section 16000(a).

- *Department's Response: The National Highway Safety Administration (NHTSA), the federal organization charged with setting FMVSS, issued a "Preliminary Statement of Policy Concerning Automated Vehicles" on May 30, 2013, which recommends that states establish reporting requirements to monitor the performance of self-driving technology during testing. NHTSA has recommended that states require the reporting of "incidents in which a self-driving vehicle,*

while operating or transitioning out of self-driving mode, is involved in a crash or near crash." The commenter's suggestion is inconsistent with the recommendation of NHTSA and would not capture accidents where the vehicle was transitioning from autonomous mode. Moreover the reporting of accidents when the vehicle is not in autonomous mode will provide a baseline for evaluation of the frequency of accidents involving autonomous vehicles. Setting a threshold for property damage accidents would not capture all accidents involving autonomous vehicles.

Section 227.46 – Reporting Disengagements of Autonomous Mode

Disengagement does not provide an effective measure of vehicle safety. Disengagement during testing is a normal part of the testing process. Test drivers will feel pressure to reduce the number of disengagements. DMV will have little use for the data.

- *Department's Response: This section has been revised to clarify the situations in which a disengagement caused by a failure of the autonomous technology must be reported.*

Section 227.48 – Vehicle Registration and Certificates of Title

The vehicle restrictions on moving a vehicle on public streets should only apply to testing purposes. It is unnecessary for a manufacturer to submit a brake and light adjustment certificate and an emissions certificate to register or transfer a vehicle as they are already required to certify that they comply with federal safety standards.

- *Department's Response: This section mirrors the general requirement that a vehicle shall not be moved or left standing on a public road unless it is properly registered with the Department. All autonomous vehicles that will be operated in California must be identified to the Department prior to the issuance of a testing permit; this requirement applies whether the vehicle is in autonomous mode or not. Google is not a traditional vehicle manufacturer and is making modifications to vehicles constructed by the original vehicle manufacturer. While the original vehicle manufacturer may have complied with federal certification requirements, the Department has no way of knowing whether the modifications to those systems have compromised the federal standards.*

Section 227.50 – Transfers of Interest or Title

Manufacturers would not be able to sell major component parts of test vehicles. Component parts such as computers, lasers, and radars have uses that have nothing to do with autonomous vehicles. Anyone attempting to use the parts to construct an autonomous vehicle would have to get a permit to operate it.

- *Department's Response: The prohibition in this section reflects the general practice of automobile manufacturers to keep test components from being sold to the general public. Traditionally, manufacturers destroy test vehicles.*

Section 227.52 – Vehicles Excluded from Testing

Manufacturers should be allowed to test commercial vehicles on public streets.

- *Department's Response: The Department believes that the testing of commercial vehicles on public roads involves safety and driver training and qualification issues that should be addressed by a separate rulemaking proceeding.*

The process for adding a vehicle to the testing application should be streamlined so that a manufacturer does not have to submit a complete new application when it is adding vehicles.

- *DMV Response: The regulations already include a simple process for adding a test vehicle.*

Commenter: E-11
Michael Harrison-Ford
Chief Strategic Officer
Zoox Pty. Ltd.
Melbourne, AU

Section 227.02 – Definitions
The definition of an autonomous vehicle test driver should be broadened to include someone not physically present in the vehicle remotely monitoring its operation.

- *Department's Response: Vehicle Code section 38750 does not permit the testing of the vehicles without a driver present in the driver's seat.*

General Comments
Level 4 technologies will make drivers and steering obsolete. Zoox is designing vehicles to perform all safety critical driving functions. The regulations are couched in terms of traditional automobiles and risks excluding the benefits of level 4 autonomy.

- *Department's Response: The regulations are couched in terms that are consistent with the Department's statutory authority. Vehicle Code section 38750 does not reference any specific level of autonomous technology, however, for testing purposes section 38750 clearly requires a driver sitting in the driver's seat able to manually control the vehicle if necessary.*

A dedicated Federal level body should be created to direct and administer autonomous vehicle regulations and legislation.

- *Department's Response: This comment requires no response.*

Commenter: E-12, H-1
Armand Feliciano
Vice President
Association of California Insurance Companies (ACIC)

Sacramento, CA

Section 227.06 – Evidence of Financial Responsibility
DMV does not have authority to require the owner/driver of an autonomous vehicle to have evidence of financial responsibility.

The section is ambiguous and not consistent with SB 1298 because it implies that there is primary and secondary insurance coverage when SB 1298 requires only one coverage.

The section should be deleted and replaced with a requirement that the $5 million covers "all liability" associated with the operation of autonomous vehicles.

- *Department's Response: The section has been revised to clarify that the proof of financial responsibility requirements of Vehicle Code section 38750(b)(3) are in addition to any other insurance obligation required by law.*

Commenter: E-13
Steven Siko
Program Manager
Advanced Safety
Chrysler Group, LLC
Auburn Hills, MI

Section 227.02 – Definitions
Interprets the definition of autonomous vehicle to be NHTSA Level 3 and suggests, for clarity, that Level 3 be referenced in the regulation.

- *Department's Response: Vehicle Code section 38750 provides the definition of autonomous vehicle that is the basis for the definitions in the regulation. California law has not adopted the NHTSA levels as the definition of autonomous vehicle.*

Section 227.18 – Requirements for Autonomous Vehicle Test Drivers
The requirement that testing on public roads be done by an autonomous vehicle test driver does not address situations where the vehicle is being driven in conventional mode in transport situations.

- *Department's Response: The regulations govern the "testing" of autonomous vehicles on public roads. Vehicle Code section 38750 (b) requires that for "testing" the vehicle only be operated by specific people. The definition of "autonomous vehicle test driver" reflects the requirements of Vehicle Code section 38750. When being transported, the vehicle is not being "tested."*

Section 227.22 – Autonomous Vehicle Test Driver Training Program

Seeks clarification of the type of defensive driver training that is required.

- *Department's Response: The type of training that is required will depend on the type of autonomous technology being tested. The manufacturer of the technology is the only one with knowledge of the specific training that is necessary for the safe operation of their test vehicles. The Department is giving manufacturers the flexibility to design their training programs to meet the needs of the technology they are developing.*

Section 227.30 – Term of Permit
Suggests that the term of a manufacturer testing permit be 2 years to align with the manufacturer's product development process.

- *Department's Response: The issuance of permits to allow the testing of autonomous vehicles on public streets is a new program and the Department expects that manufacturers will have changes in the technology being tested as the technology is modified and matures that will need to be considered in the permitting process. The Department would not be able to address those changed circumstances if the permit were issued for longer periods.*

Section 227.46 – Reporting Disengagement of Autonomous Mode
Interprets the requirement to report disengagements to refer to emergency situations and seeks confirmation that DMV is not seeking information on routine disengagements.

- *Department's Response: This section has been revised to clarify the situations in which a disengagement caused by a failure of the autonomous technology must be reported.*

General Comment
Chrysler supports the NHTSA May 2013 statement that performance standards should be left to regulation by the federal regulators.

- *Department's Response: NHTSA has not adopted performance standards for the testing of autonomous technology and Vehicle Code section 38750 gives the Department the authority to adopt performance standards that the Department concludes are necessary to ensure the safe operation of autonomous vehicles on public roads.*

Commenter: E-14
David Agnew
Technology Strategy & Research
Continental Automotive Systems, Inc.
Auburn Hills, MI

Section 227.46 – Reporting Disengagements of Autonomous Mode

Reports of disengagement could be used by competitors to their advantage; consequently they should be deemed confidential business information exempt from public disclosure.

- *Department's Response: Government Code section 6252 (e) defines a "public record" as any "writing containing information relating to the conduct of the public's business prepared, owned, used, or retained by any state or local agency." Government Code section 6253 (a) states that "public records are open to inspection at all times during the office hours of the state…and every person has a right to inspect any public record except, as hereafter protected." Government Code section 6254 exempts certain records from disclosure. The Department will deem information confidential to the extent it is exempt from disclosure by Government Code section 6254.*

Commenter: PS-1
John Tillman
Manager
Regulatory Affairs
Mercedes-Benz
Research and Development
Sacramento, CA

Section 227.02 – Definitions
"Autonomous mode" does not define the meaning of an autonomous vehicle. Suggests an alternate definition of "autonomous vehicle" that is almost a verbatim recitation of the definition of autonomous vehicle in Vehicle Code section38750 (a)(2) (A) and (B). Also suggests a definition for "autonomous mode" that would include the operation of a vehicle whether or not a person is inside the vehicle.

- *Department's Response: Vehicle Code section 38750 provides the definition of autonomous vehicle that is the basis for the definitions in the regulation. The definition in the regulation is consistent with Vehicle Code section 38750 (a). Government Code Section 11349.1 specifies that the Office of Administrative Law shall review all regulations and make its approval determination based on several standards – one of which is "nonduplication." Government Code Section 11349 (f) explains that the nonduplication standard is intended "to prevent the indiscriminate incorporation of statutory language in a regulation. The definitions provided in the regulation are strictly based on the definitions, while not verbatim, provided in Vehicle Code Section 38750. The Department rejects this comment.*

Mercedes-Benz does not see "autonomous mode" as defining the meaning of an "autonomous vehicle" and thus proposes the following alternate definition of "autonomous vehicle" and its subsequent corollary "autonomous mode:"
"(b) Autonomous vehicle" means any vehicle equipped with autonomous technology that has been integrated into the vehicle. "Autonomous vehicle" does not include a

vehicle that is equipped with one or more collision avoidance systems, park assist, adaptive cruise control, lane keep assist, lane departure warning, traffic jam and queuing assist, or other similar systems that enhances safety or provide driver assistance, but are not capable , collectively or singularly, of driving the vehicle without the active control or monitoring of a human operator."

- *Department's Response: The definition of "Autonomous vehicle" is consistent with the definition of autonomous vehicle specified in Vehicle Code Section 38750 (a)(2)(A) and (B), without reference to the specific examples of collision avoidance systems that are listed as "including, but not limited to" in (a)(2)(b). The definition proposed by the regulations covers "collision avoidance systems" without placing a limitation of what those systems would be. The language suggested by the commenter could be read to place a limit on the type of collision avoidance systems that are acceptable and would be contrary to the authority in Vehicle Code Section 38750.*

The definition of "autonomous vehicle test driver" conflicts with the test driver qualifications in section 227.18 because 227.02 (c) requires that the driver be seated in the seat during testing which would preclude testing of low speed autonomous vehicles.

- *Department's Response: The sections do not conflict. Vehicle Code section 38750 (b)(2) requires that the driver be seated in the driver's seat of the vehicle. The definitions are consistent with this requirement.*

The definition of "conventional mode" should be clarified to state that the vehicle is being operated under the active physical control of a person in the driver's seat and the autonomous technology is disengaged.

- *Department's Response: The section already defines conventional mode as the vehicle being under the control of a person sitting in the driver's seat operating or driving the vehicle with the autonomous technology disengaged.*

The definition of "manufacturer" should include any "entity" that modifies a vehicle by installing autonomous technology.

- *Department's Response: The section has been revised to reference Vehicle Code section 470 which defines "person" to be "a natural person, firm, copartnership, association, limited liability company, or corporation."*

<u>Section 227.20 – Autonomous Vehicle Test Driver Qualifications</u>
The requirement that a test driver not have more than one point is too stringent and the violations in the Vehicle Code do not align with the laws of other jurisdictions. This requirement could impact professional drivers and company executives. The requirement should be deleted.

- *Department's Response: The Department has been a member of the Driver's License Compact (Vehicle Code section 15000) for the past 50 years. The Compact requires the Department to recognize violations that occur in other jurisdictions. The requirements for a test driver mirror the definition of a "good driver" found in the Insurance Code. With the Passage of Proposition 103 in 1988, the citizens of California have made a determination that people who meet the criteria specified in Section 227.20 are the safest drivers. The definition ensures that the test driver meet the public's expectation that the vehicles are entrusted to the safest drivers.*

Section 227.42 – Reinstatement of Testing Permit
Suggested the inclusion of the word "revocation" in the section dealing with the suspension of a testing permit.

- *Department's Response: This section deals with a reinstatement of a testing permit after a suspension. A revocation of a permit is not the same as a suspension; consequently the insertion of "revocation" in this section is inappropriate.*

Section 227.44 – Reporting Accidents
It is unclear who would make the determination that an accident was directly caused by an autonomous vehicle. The section should clarify whether all accidents involving an autonomous vehicle must be reported.

- *Department's Response: The section does not require anyone to make a fault determination. The section requires the reporting when an autonomous vehicle is "in any manner involved in an accident originating from the operation" of the vehicle on public roads.*

Section 227.46 – Reporting Disengagements of Autonomous Mode
The extent of the data required by this section is unclear and an "autonomous shutdown event" is not defined. The language of Section 38750 (c)(1)(G) on the retention of crash data would facilitate more clarity. The current requirement for reporting disengagements could be interpreted to include test shutdowns and normal disengagements.

- *Department's Response: This section has been revised to clarify the situations in which a disengagement caused by a failure of the autonomous technology must be reported.*

Section 227.52 – Vehicles Excluded from Testing
There are potential benefits to testing commercial vehicles and the Department should consider alternative requirements other than the outright ban on testing commercial vehicles.

- *Department's Response: The Department believes that the testing of commercial vehicles on public roads raises heightened safety and driver training and*

qualification issues that should be addressed by a separate rulemaking proceeding.

Protection of proprietary test data is important, consequently there is concern about how annual summary data will be handled and published by public entities.

- *Department's Response: Government Code section 6252 (e) defines a "public record" as any "writing containing information relating to the conduct of the public's business prepared, owned, used, or retained by any state or local agency." Government Code section 6253 (a) states that "public records are open to inspection at all times during the office hours of the state…and every person has a right to inspect any public record except, as hereafter protected." Government Code section 6254 exempts certain records from disclosure. The Department will deem information confidential to the extent it is exempt from disclosure by Government Code section 6254.*

6) Modified Regulatory Text and 15-day Comment Period

As a result of the written comments received during the 45-day comment period and oral comments received during the public hearing, the Department determined that additional modifications to the originally proposed text of the regulations were necessary.

The notice of modification, modified text, and statement of reasons for the modifications, was made available to the public, including posting on the Department's internet site, on March 6, 2014. The beginning and ending dates for this public availability period were March 6, 2014 through March 21, 2014.

The Department received five letters providing comment on the modified text.

7) Comments Received During the 15-Day Comment Period with the Department's Responses

Robert Peterson
Professor of Law
Director, Center for Insurance Law and Regulation
Santa Clara University
Santa Clara, CA

The commenter states that the, "good driving," standard, which requires the suspension of a test driver who runs afoul of the standard set by the Department, should be modified

or deleted, as the adoption of the good driver rules found in Proposition 103 and implementing regulations is inapposite for trained test drivers of self-driving cars.

Department's Response: This comment was submitted during the 45-day comment period and the Department responded to it at that time. No further modification or response is necessary.

Armand Feliciano
Vice-President
Association of California Insurance Companies

- *Department's Response: The commenter's letter is nearly identical to that submitted during the 45-day notice period and does not reflect the fact that the regulation was changed to address ACIC's concerns. The letter does not seem to be based on a thorough evaluation of the changed text; consequently, the criticism is without merit.*

Ron Medford
Google

The commenter, raised concerns related to the provisions of Section 227.24 (Manufacturer's Testing Permit).

- *Department's Response: This section was not modified and subject to comments in the 15 day notice period. No further modification or response is necessary.*

The commenter focused primarily on the disengagements and the annual report of disengagements. With respect to the definition of disengagements and the annual report, the commenter argues that the amendments, made to clarify the disengagement to include a deactivation of the autonomous mode when a failure of the autonomous technology is detected or when the safe operation of the vehicle requires that the autonomous vehicle test driver disengages the autonomous mode and take immediate manual control, are an overly broad reporting requirement that will put a significant burden on manufacturers and does not accurately represent the progress of the autonomous technology under development.

Department's Response: Acting upon Mr. Medford's comments, presented at the January 14 public hearing where he explained that a number count of disengagements is of little use to the Department and that "the useful information would actually come from understanding the circumstances and perhaps the features set that's being tested by a manufacturer," (Public Hearing Transcript, p. 23, lines 13 – 18 (Jan. 14, 2014)), the Department determined it necessary to modify Section 227.46 to give a manufacturer an opportunity to provide a clear description regarding the circumstances that lead to the disengagement. Section 227.46(b)(3)(A)(ii) allows the manufacturer to indicate whether the disengagement is a result of a planned test of the autonomous technology.

The commenter provided several examples where the reporting of a "routine" disengagement may be counter-indicative of the information on which the Department wants results. The commenter asserts that the annual report would capture routine disengagements that occur due to known system limitations that the manufacturer has anticipated or is specifically testing.

Department's Response: The reporting of disengagements allows the Department to observe and track how autonomous systems are developing and how drivers respond to conditions that require the disengagement of the technology for the continued safe operation of the vehicle.

The commentator is concerned that establishing the information to be included in the annual report requires manufacturers to provide specific data on each disengagement, rather than the summary originally envisioned.

Department's Response: At the January public hearing, Mr. Medford explained that numbers, lacking the information surrounding the disengagement is of little to no value to the Department. The Department agrees with Mr. Medford's assertion and has provided additional information to be included in the report that will allow the Department to have greater information related to the progression of the autonomous technology.

The Department also notes that the commenter repeatedly claims that the regulations could provide a disincentive for the test driver to err on the side of caution during the vehicle testing. Under these regulations, and best business practices, a manufacturer has a duty to ensure that its test drivers operate test autonomous vehicles safely. A manufacturer should ensure that it does not employ a driver who is not capable of safely operating the vehicle as required by section 227.18.

The commenter raised concern about the public release of confidential disengagement data, including proprietary information on the specific autonomous features under development, the capabilities of current test vehicles, the state of development, the number of testing miles, and testing methodologies. The commenter explained that the information is highly confidential and subject to strict disclosure controls in place by Google and, possibly, other manufacturers and the Department cannot reasonably expect the commenter or any other manufacturer to disclose such sensitive information without protecting its confidentiality.

- *Department's Response: The commenter fails to recognize that California law, Vehicle Code section 38750, requires the Department to promulgate regulations to ensure public safety during the testing of this experimental technology. The reporting requirements of the regulations are necessary for the Department to fulfill that statutory obligation. Government Code section 6252 (e) defines a "public record" as any "writing containing information relating to the conduct of the public's business prepared, owned, used, or retained by any state or local agency." Government Code section 6253 (a) states that "public records are open to inspection at all times during the office hours of the state…and every person*

has a right to inspect any public record except, as hereafter protected." Government Code section 6254 exempts certain records from disclosure. The Department will deem information confidential to the extent it is exempt from disclosure by Government Code section 6254.

Chris Pavloff
BMW Group

The commenter argues that requiring a manufacturer to report the amount of time elapsed from when the test driver was alerted of a failure in the autonomous technology and when he or she retakes manual control of the vehicle is not easy to record because it is not always clear when a system or function failure is occurring or if the system is performing sub-optimally. The commenter also argues that the time metric is unimportant because it is measuring the reaction time of a human being to take over manual control and is not an indicator of system performance.

- *Department's response: This information is necessary for the evaluation of the progression of the autonomous technology. The Department must fulfill its statutory obligation to ensure the safe operation of this experimental technology on public streets. This information will allow the Department to evaluate how drivers respond to unexpected events that, for safety reasons, require the disengagement of the autonomous technology.*

The commenter also provides comment on Section 227.48, Vehicle Registration and Certificates of Title, however, this section was not modified and open for comment in the 15 day comment period; the comment period for this section closed on January 13, 2014. No response is necessary.

Anthony Cooke
Volkswagen Group of America

The commenter argues that the Department should require reporting only of those instances of "disengagement of the autonomous mode" that were unplanned or unexpected. Other instances of disengagement that are routine or expected given the state of the prototype automated driving system under test need not be reported.

The commenter explained that, during the testing phase there could be numerous occasions when the prototype automated driving system would require that the vehicle's test driver take control of the vehicle. These are routine situations that the automated driving system is not designed to handle in the given stage of research or testing.

- *Department's Response: The Department has modified the regulation to require the reporting of disengagements when there is a failure of the autonomous technology or the driver determines that the safe operation of vehicle requires the immediate disengagement of the technology. In both of these instances the*

continued safe operation of the vehicle requires that the autonomous technology be disengaged. The purpose of allowing testing is to ensure that the eventual operation of the vehicles by the public is safe. Obtaining information about when the safe operation of the vehicle requires the deactivation of the autonomous technology is essential to determining whether it is safe for the public at large to operate the vehicles.

The commenter also argues that information contained in the annual report should be confidential with the Department as it is with the manufacturer itself. Making the information available in the public domain would put automobile manufacturers at a competitive disadvantage.

- *Department's Response: The commenter fails to recognize that California law, Vehicle Code section 38750, requires the Department to promulgate regulations to ensure public safety during the testing of this experimental technology. The reporting requirements of the regulations are necessary for the Department to fulfill that statutory obligation. Government Code section 6252 (e) defines a "public record" as any "writing containing information relating to the conduct of the public's business prepared, owned, used, or retained by any state or local agency." Government Code section 6253 (a) states that "public records are open to inspection at all times during the office hours of the state…and every person has a right to inspect any public record except, as hereafter protected." Government Code section 6254 exempts certain records from disclosure. The Department will deem information confidential to the extent it is exempt from disclosure by Government Code section 6254.*

8) Documents Incorporated by Reference

The following documents were incorporated by reference in the proposed regulatory text:

- Autonomous Vehicle Tester Program (AVT) Application for Manufacturer's Testing Permit, form OL 311 (NEW 9/2013), in Section 227.26
- Autonomous Vehicle Testing (AVT) Program Test Vehicle Permit, form OL 313 (NEW 9/2013), in Section 227.48
- Autonomous Vehicle Testing (AVT) Program Test Vehicle Operator Permit, form OL 314 (NEW 9/2013), in Section 227.20
- Autonomous Vehicle Testing (AVT) Program Manufacturer Permit, form OL 315 (NEW 9/2013), in Section 227.28
- Report of Traffic Accident Involving an Autonomous Vehicle, form OL 316 (NEW 10/2013), in Section 227.44
- Autonomous Vehicle Manufacturer Surety Bond, form OL 317 (NEW 9/2013), in Section 227.10
- Autonomous Vehicle Tester (AVT) Program Application for Certificate of Self-Insurance, form OL 319 (NEW 9/2013), in Section 227.14

These documents are not published in the California Code of Regulations because it would be impractical and cumbersome to do so; however, the documents were readily available to interested parties during the 45-day comment period, on the Department's website. No comments were received related to the forms.

98) Determination of Alternatives

No reasonable alternative considered by the Department, or that has otherwise been identified and brought to the attention of the Department, would be more effective in carrying out the purpose for which these regulations are proposed, would be as effective and less burdensome to affected private persons than the proposed regulations or would be more cost effective to affected private persons and equally effective in implementing the statutory policy or other provision of law.