

**BEFORE THE PUBLIC UTILITIES COMMISSION OF THE
STATE OF CALIFORNIA**

Order Instituting Rulemaking on
Regulations Relating to Passenger
Carriers, Ridesharing, and New
Online-Enabled Transportation
Services.

R.12-12-011
(Filed December 20, 2020)

**OPENING COMMENTS OF THE SAN FRANCISCO MUNICIPAL TRANSPORTATION
AGENCY AND THE SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY ON
THE PROPOSED DECISION AUTHORIZING DEPLOYMENT OF DRIVERED AND
DRIVERLESS AUTONOMOUS VEHICLE PASSENGER SERVICE**

JEFFREY P. TUMLIN
Director of Transportation
San Francisco Municipal Transportation Agency
One South Van Ness Avenue, 7th Floor
San Francisco, CA 94103
(415) 701-4720

TILLY CHANG
Executive Director
San Francisco County Transportation Authority
1455 Market Street, 22nd Floor
San Francisco, CA 94103
(415) 522-4832

Dated: November 4, 2020

SUBJECT INDEX

Introduction.....1

Discussion.....3

 I. Based on incomplete and erroneous representation of the factual record, the Proposed Decision retreats from the disability access leadership called for in California policy. The Commission should amend the PD to add a goal that AV Passenger Services should provide equivalent service to people with disabilities, including wheelchair users.....3

 II. Based on technical errors and omissions, the PD’s proposed data reporting will not enable the Commission or others to effectively assess a permit holder’s operations or progress in relation to Commission goals. The Commission should amend the Proposed Decision to strengthen initial application requirements and modify reporting requirements to improve Commission and public understanding of the development and operation of AV Passenger Services.7

 A. Application Requirements7

 B. Data Reporting Requirements.....9

 III. The Commission may not adopt the Proposed Decision without documenting how it is supported by environmental review under the California Environmental Quality Act.12

Conclusion14

Introduction

The San Francisco Municipal Transportation Agency (“SFMTA”) and the San Francisco County Transportation Agency (“SFCTA”) (together the “City and County”) submit these comments jointly on the Proposed Decision, dated October 15, 2020, Authorizing Deployment of Drivered and Driverless AV Passenger Services (“AVPS”) (the “Proposed Decision” or “PD”). The City and County support the Opening Comments, filed separately, by the San Francisco International Airport. First, we applaud many elements of the Proposed Decision, including those that:

- Establish four goals to guide the existing pilot and new deployment programs;¹
- Approve fare-splitting/shared rides; (PD, p. 18)
- Require a Transportation Charter-Party Carrier (TCP Carrier) that wishes to participate in the AV deployment program to submit an application as a Tier 3 Advice Letter that must be served on all parties and approved by the Commission; (PD, Order, paragraph 18)
- Require any Tier 3 Advice Letter to include a Passenger Safety Plan; (PD, p.82)
- Clarify that for current pilot reporting requirements, “accessible rides” refers to WAV trips; (PD, p. 66)
- Require submission of per trip, monthly, and quarterly data in sections 5.k (Drivered AV Passenger Service) and 7.m (Driverless AV Passenger Service) of the Order; (PD, p. 109 and 116-117)
- Require data reporting on terms consistent with pathbreaking D.20-03-014 on Data Confidentiality Issues and GO 66 D; (PD, p. 26)
- Reject industry arguments that the Commission should not adopt unique requirements that apply to AV Passenger Service (AVPS) that do not apply to other types of Charter Party Carrier service such as TNC service (PD, p. 27).

¹ We note, however, that reporting requirements are established in the PD but goals are not actually adopted. In Appendix 2, we propose additions to the Conclusions of Law to adopt these goals and make other additions to them as discussed below.

Changes to Proposed Decision

While the City and County applaud elements of the Proposed Decision identified above, the record supporting other aspects of the Proposed Decision is flawed by factual and technical errors and omissions.² The Commission should not adopt the Proposed Decision without either allowing additional development of the record or, based on material already in the record, making the following changes:

- 1) adding a Commission goal to ensure AVPS will be deployed in a way that provides equivalent services to people with disabilities, including wheelchair users; and
- 2) amending the application and data reporting requirements to allow effective assessment of permit holder operations in relation to Commission goals; and
- 3) documenting how the Proposed Decision is supported by appropriate environmental review under the California Environmental Quality Act.³

The SFMTA and SFCTA Opening Comments on Questions 2-8 recommended a “Path to Deployment” that called for an applicant to demonstrate some measure of achievement in relation to proposed CPUC goals before the issuance of a deployment permit and recommended authorizing fare collection under the Pilot Permit program.⁴ The PD rejected the “Path to Deployment” proposal and instead maintains a clear distinction under which AVPS Pilot Program permittees cannot charge for passenger service but AVPS Deployment Program permittees may do so, without regard to operations in relation to Commission goals. Thus, the goals adopted by the Commission serve only as statements of principle, as the PD itself describes them (PD, p. 26) that do not, in and of themselves compel any particular developer achievement as a condition of receiving a deployment permit. (PD, p. 26) The City and County comments below offer recommendations for improving the monitoring and public education

² Text supporting all of the changes recommended in items 1-3 here is reflected in Appendix 1 (Proposed Amendments Findings of Fact), Appendix 2 (Proposed Amendments Conclusions of Law) Appendix 3 (Proposed Amendments Order) and Appendix 4 (Technical Errors and Corrections).

³ San Francisco Planning, the City department that has responsibility for administering the City’s Office of Environmental Review, supports these comments for purposes of this discussion.

⁴ The PD incorrectly describes the SFMTA and SFCTA’s Path to Deployment proposal in the Opening Comments of Q 2-8 in multiple places and for the sake of the record, we correct those errors in Appendix 4.

tools that support the Commission goals; they are not intended to revive the proposed Path to Deployment outlined in the comments the City and County filed in January, February and March, 2020.⁵ The discussion of policy goals below assumes that both *metrics* in relation to the Commission’s goals and *targets* for performance in relation to those goals will be discussed at future Commission workshops and developed in subsequent Commission proceedings.

Discussion

I. BASED ON INCOMPLETE AND ERRONEOUS REPRESENTATION OF THE FACTUAL RECORD, THE PROPOSED DECISION RETREATS FROM THE DISABILITY ACCESS LEADERSHIP CALLED FOR IN CALIFORNIA POLICY. THE COMMISSION SHOULD AMEND THE PD TO ADD A GOAL THAT AV PASSENGER SERVICES SHOULD PROVIDE EQUIVALENT SERVICE TO PEOPLE WITH DISABILITIES, INCLUDING WHEELCHAIR USERS.

While it adopts four high level policy goals, the PD declines to adopt any goal specifically addressing access to AV Passenger Services by people with disabilities. Instead, the PD purports to address the varied and particular needs of people with disabilities by sweeping them into a general goal to “expand the benefits of AV technologies to all of California’s communities.”⁶ The Commission should reverse these judgments and modify the Proposed Decision for many reasons.

First, if goals like this were sufficient to give people with disabilities access to all the benefits of life fully integrated into their communities, there would have been no need for adoption of the Americans with Disabilities Act (ADA) 30 years ago. The ADA calls for *preventing discrimination* in transportation because of the crucial role transportation plays in liberating people with disabilities to live full lives across many dimensions. Long after adoption of the ADA, the California Legislature

⁵ Further, while the City and County disagree with the PD’s rejection of the recommended street safety goal, we will address this issue further in future proceedings.

⁶ In addition to not adequately serving the needs of people with disabilities, we note that it is difficult to discern the intended difference between this goal and the subsequent goal, “Improve transportation options for all, particularly disadvantaged communities and low-income communities.” Thus, as reflected in Appendix 2, the City and County’s Proposed Amendments recommend replacing the second goal with a goal focused on service to people with disabilities.

declared “it is the intent of the Legislature that California be a national leader in the deployment and adoption of on-demand transportation options for persons with disabilities.”⁷

The PD does not reflect such leadership. Instead, it raises the prospect of recreating the current situation where, seven years after adoption of the Commission’s first Order regulating TNCs and two years after adoption of SB 1376 (TNC Access for All), TNCs are still struggling to make any meaningful progress in retrofitting a service model that was not required to incorporate accessibility from the start. AV developers are designing and building new driving technology, new vehicles, and new passenger services models from the ground up. Setting an expectation that AVPS developers will apply and incorporate universal design principles in these early years of industry development is the best approach to ensuring delivery of equivalent service to people with disabilities as the industry matures.

Second, after an extremely selective summary of the record, the PD’s rationales for declining to adopt the recommended Disability Access goal⁸ are totally inadequate to support this conclusion. The PD states: 1) Cruise and Zoox are building new vehicles from the ground up but these models are not ready yet; 2) Currently, AV companies largely use retrofitted versions of production-line vehicles [and] may not have control over whether accessible vehicles that allow for AV testing are reasonably available; and 3) Setting accessibility requirements might not actually expand accessibility and could delay the development of AV technology. (PD, p. 38-39)

The first two rationales essentially state that the Commission should not adopt a goal because it has not yet been achieved. This wholly fails to capture the purpose of a goal. A regulatory goal is a

⁷ Like many other parties, the City and County do not believe the Access for All Legislation (SB 1376) provides an appropriate model for ensuring access to AV Passenger Services for people with disabilities because AV Passenger Services will not be delivered in the ‘personally owned vehicles’ that triggered the complex structure of Access for All. However, this finding sets direction for the state beyond the details of TNC regulation.

⁸ SFMTA and SFCTA Opening Comments, Questions 2-8, p. 7: “AV Passenger Services should provide equivalent service to people with disabilities, including people using wheelchairs”; Supported by: Reply Comments of San Francisco International Airport at p. 1; LA Metro Reply Comments at p. 4; MTC Opening Comments, Questions 2-8 at p. 5; SANDAG Reply Comments at p. 3; California Transit Association Reply Comments at pp. 4-5.

statement of future expectations and intentions, not a report on the status quo of any characteristic of an industry. Furthermore, it is simply false to assert that AV developers have no control over the conventional vehicles they adapt to test and develop automated driving. AV developers have many avenues for testing and delivering equivalent services – including using test vehicles with the same kinds of post-production accessibility modifications currently used to provide wheelchair access in conventional personally owned and fleet passenger services. Developers of AV Passenger Services could be adding the sensors, software and hardware required to test automated driving to these vehicles that are presently available on the commercial market.

As to the third rationale, it is true that developers seek as little regulation as possible and would prefer to avoid the challenge of addressing any public purpose goals as they address the technical challenge of mastering automated driving in a commercially feasible manner. It is also true – and unmentioned in the PD – that innovative new mobility technologies, when developed with no attention to universal design, may improve mobility for some people with disabilities while actually reducing mobility options for others. This is precisely the recent history of TNC service in San Francisco, and the Commission should not permit a repeat of this history.⁹ The California Council for the Blind warned against making a similar mistake, cautioning that “Though our members are not wheelchair users, we are concerned with [service to people who use wheelchairs]. . . and believe that before any conclusions about the effectiveness of driverless AV service for the public can be drawn, plans have to be made for incorporation of vehicles with the area accessibility features into the fleet of driverless AV’s.”¹⁰

Yet, in an apparent effort to avoid increasing challenges for the AVPS industry, the PD overstates industry arguments against accessibility mandates and overcompensates by not establishing a goal at all. A goal is a goal: not a mandate to incorporate a particular feature, a requirement to use a particular

⁹ SFMTA and SFCTA Opening Comments, Questions 2-8, p. 28

¹⁰ California Council of the Blind Opening Comments, Question 1, p. 8

technology or a requirement to do so by a particular date. Thus, while we urge the Commission to adopt an explicit accessibility goal, the City and County agree with many developer comments that oppose *specific mandates* at this time as potentially undermining the benefits of innovation that could be directed to *servicing the needs* of passengers who have a range of disabilities. For example:

- The City and County agree with Cruise that the disability community faces diverse barriers and has diverse needs, and we agree that a flexible iterative approach that strives for continuous improvement is called for.¹¹
- The City and County agree with Lyft that the Commission should not “attempt to prescribe vehicle or hardware design or otherwise impose specific accessibility mandates at this very early state in the process. . . .” and that “the rapid pace of innovation in this area provides a golden opportunity for companies to consider accessibility at the outset, as a core element of broader AV passenger service.”¹²
- We agree that “the Commission should tread lightly” and should not establish mandates at this time.” And that “the Commission could “require as a condition of granting a permit that applicants submit a plan for incorporating accessibility into their AV service offering. . . . in order to encourage companies to think about accessibility early on in the development of this new technology.”¹³

This is precisely the Commission’s most immediate leadership task: to set a goal that encourages AV developers to think about accessibility early in the development of AV Passenger Services and the vehicles in which they are provided.¹⁴ In addition, the Commission should revise the PD to require companies to submit a Disability Access Plan with a permit application.¹⁵ This is the kind of light

¹¹ Cruise Opening Comments, Questions 2-8, pages 6-8.

¹² Lyft Opening Comments, Questions 2-8, p. 6.

¹³ Id. Aurora argued against “preemptive regulation” of accessibility “in a narrow manner [that] will serve only to stifle innovation, preventing companies from considering how autonomous technology can best address distinctive hurdles of [people with different disabilities]. A high-level policy goal is not preemptive regulation that stifles innovation. See Aurora Opening Comments on Questions 2-9, page 4.

¹⁴ We note that on November 2, 2020, Disability Rights Education & Defense Fund (DREDF) and Disability Rights California (DRC), wrote in opposition to the Commission’s Conclusions of Law authorizing the deployment of drivered and driverless autonomous vehicle passenger service by entities without including any particular disability access requirements for the vehicles or services themselves. As a remedy, the letter urges the Commission to revise its Proposed Decision to reflect the principles of the ADA, including universal design and full accessibility.

¹⁵ The PD does consider the particular passenger safety issues that may arise for individuals with disabilities in its requirement that permit applicants submit a Passenger Safety Plan with their Tier 3 Advice Letter. While this is desirable, it is less meaningful where barriers prevent people with disabilities from even becoming passengers. The PD also requires permit holders to provide quarterly narrative reports on actions taken to

touch, and iterative approach encouraging continuous improvement that the City and County – and many developers – have recommended to the Commission. Rather than providing prescriptive metrics, it leaves it entirely to developers to identify HOW they provide equivalent service and explain which barriers to people with disabilities permit holders will address first and how they will strive to broaden the barriers to service they address and overcome for prospective passengers.

In conclusion, the Commission should revise the PD Findings of Fact as proposed in Appendix 1 to acknowledge the intent of the Legislature that California should be a national leader in deploying on-demand transportation for persons with disabilities, revise the Conclusions of Law as proposed in Appendix 2 to include that it is reasonable for the Commission to adopt a goal addressing the accessibility of AV Passenger Services to people with disabilities and require the submission of a Disability Action Plan with a permit application and revise the PD Order as proposed in Appendix 3 to require the submission of a Disability Action Plan as part of the Tier 3 Advice Letter.

II. BASED ON TECHNICAL ERRORS AND OMISSIONS, THE PD’S PROPOSED DATA REPORTING WILL NOT ENABLE THE COMMISSION OR OTHERS TO EFFECTIVELY ASSESS A PERMIT HOLDER’S OPERATIONS OR PROGRESS IN RELATION TO COMMISSION GOALS. THE COMMISSION SHOULD AMEND THE PROPOSED DECISION TO STRENGTHEN INITIAL APPLICATION REQUIREMENTS AND MODIFY REPORTING REQUIREMENTS TO IMPROVE COMMISSION AND PUBLIC UNDERSTANDING OF THE DEVELOPMENT AND OPERATION OF AV PASSENGER SERVICES.

A. Application Requirements

We reiterate City and County support for the PD’s adoption of an application process for TCP Carriers wishing to provide AV Passenger Services that includes filing a Tier 3 Advice Letter. With respect to the proposed passenger safety goal, the PD requires the Tier 3 Advice Letter reflecting to contain a Passenger Safety Plan that explains how an applicant will address the Passenger Safety goal. The PD reasons that “public review of each applicant’s Passenger Safety Plan will allow for the careful

provide service to the disability community. However, if applicants do not identify their general goals or understanding of barriers that need to be addressed, it will be impractical to monitor their progress.

critique and assessment of the adequacy of each applicant’s plan by stakeholders, providing opportunity for suggestions that could further promote passenger safety.” (PD, p.19). We agree with this statement and believe that in the absence of targets and metrics in the short term, this careful critique and assessment by stakeholders would play an equally important role in review of applicant plans in relation to other Commission goals.

To obtain the benefits of stakeholder assessment and input, we urge the Commission to amend the Proposed Decision to require applicants to submit a Disability Access Plan, an Air Quality and Climate Protection Plan and an Equity Plan. Making these plans available for public review will allow the range of stakeholders who may be impacted by AV services, both positively and negatively, to assess and critique applicant approaches and propose potential adjustments to proposed deployments in particular service areas. *Plans* are not *targets*. Commission review of any plans submitted as part of the Advice Letter process will support the development of outcome-based regulation that enables innovators to explore different methods for achieving public goals without inhibiting innovation through burdensome prescriptive details. (SFMTA and SFCTA Opening Comments Questions 2-8, p. 10). In explaining the choice not to adopt “uniform equity targets,” the Commission states, “Companies will operate under different business models and at different scales.” (PD, p. 42). This is absolutely correct. But it demonstrates why submission of plans in relation to each Commission goal is a flexible method for each permittee to inform both the Commission and the public about planned operations in reference to the specific service area for which the applicant plans to provide AV Passenger Service. The service area should correspond to the operational design domain (“ODD”) identified in the application or a subset of the ODD. Improved disability access and air quality benefits, for example, will be realized within the specific service area for which AVPS is deployed. Given that anticipated ODDs and service areas throughout the state vary substantially - AV Passenger Services offered using a ride-hailing model in the City and County of San Francisco will look quite different from low speed automated shuttles that

may be offered in a suburban office park. Plans tailored to the ODD will offer the best opportunity for the Commission and public to consider the benefits and risks of AVPS in different environments.

Commission requirements for applicant Plans should call for explanation of any features of the service plans, product designs, passenger interfaces, vehicle design, payment methods, and policies and procedures that are aimed at:

- delivering equivalent service to people with disabilities, including people who use wheelchairs (Disability Access Plan);
- minimizing deadheading and vehicle miles traveled (VMT), reducing greenhouse gas (GHG) emissions, air quality hazards and toxic air contaminants, particularly in Disadvantaged Communities and maximizing use of zero-emission vehicles consistent with the State's zero-emission vehicle goal (Air Quality and Climate Protection Plan);
- ensuring equitable delivery of service to low-income communities; disadvantaged communities; and communities that are rural, speak a primary language other than English, or are otherwise hard to reach; and minimizing the potential negative effects of AVPS (Equity Plan).

In conclusion, the Commission should revise the Conclusions of Law as proposed in Appendix 2 to include that it is reasonable for the Commission to require the submission of a Disability Access Plan, Air Quality and Climate Protection Plan, and Equity Plan, and revise the PD Order as proposed in Appendix 3 to require these plans as part of the Tier 3 Advice Letter.

B. Data Reporting Requirements

We reiterate our support for requiring data reporting on terms consistent with D. 20-03-014 on Data Confidentiality Issues and GO 66 D (PD, p. 27). We also support CPED maintaining on its website a list of the data it collects from AV companies and requiring a data reporting template AV companies must use when submitting their quarterly reports (PD, p. 75). If companies are not required to submit

data in a consistent format, analysis and assessment by the Commission and the public will be difficult, if not impossible.

At the same time, the Commission's proposed data reporting is not technically sufficient to allow the Commission, or others, to actually discern progress towards its goals as the PD states it will. Due to the technical errors described below, we urge the Commission to modify the PD requirements related to VMT data collection, unfulfilled trip requests, trip date reporting, service equity, and passenger complaints. These comments apply to both the Drivered and Driverless deployment program, except where specifically noted, and are addressed in line edits in Appendices 2 & 3.

1. VMT Data Collection: As the PD is currently written, the Commission will not be able to effectively analyze GHG and VMT impacts of AV Passenger Services because the data collection methods do not account for the overlapping nature of shared rides. In light of the global climate crisis, the Commission should collect data in a form that enables both the Commission and others to understand the total volume of VMT generated in each trip period, time spent in each trip period, and the ratio of person miles traveled (PMT) to VMT. This ratio is a critical efficiency metric for measuring, for example, developer efforts to increase AV occupancy, and to minimize low occupancy or empty miles driven. This modification is also needed to assess operations in relation to the Commission's environmental goals of reducing greenhouse gas emissions, criteria air pollutants, and toxic air contaminants, particularly in disadvantaged communities.

As Figure 1 (Appendix 4) demonstrates, the overlapping, non-sequential aspect of shared rides presents challenges with potential for double-counting of VMT when multiple simultaneous trips occur in the same Period, as well as challenges with classification when multiple simultaneous trips are in different Periods. These challenges are present for both detailed trip-level data, as well as monthly aggregate reporting, and can only be resolved by extending the proposed trip-level data

reporting approach to include vehicle segment reporting to capture these complexities. Appendix 4 provides a recommended approach to avoid this data reporting problem.

In addition, to accurately monitor the total monthly VMT associated with AVPS, the Commission must require reporting of Total VMT -- including VMT associated with Period 1, 2 and 3 operations and the miles driven between the storage or parking depot and the start of Period 1 and from the end of Period 3 back to the depot. VMT reporting should separately capture VMT during mapping or testing authorized under only DMV permits, and other non-passenger service-related activities. See Appendix 2 pages 5 and 13, and Appendix 3 pages 5 and 15.

2. Unfulfilled Trip Requests: The PD errs by requiring information on trips *completed* but no information on trips *requested*. While we support the PD's intent to monitor trips provided to or from disadvantaged and low-income communities, this data will tell only half the story if it does not reflect the experience of passengers who are unable to secure service (unfulfilled demand). To allow for monitoring trips that are not fulfilled, the Commission should require reporting of the census tract, zip code, date, time, and fulfillment status (including reason for non-fulfillment) with respect to each trip request submitted by an intending passenger. See Appendix 2 pages 5 and 13, and Appendix 3 pages 5 and 14.

3. Trip Date Reporting: The PD calls for reporting of trip data in a form that captures time of day but not date. For each trip, the date should be reported to record when the vehicle accepted a ride, picked up the passenger, and dropped off the passenger to understand the differences among the days of the week, months, holidays and factors such as special events. See Appendix 2 pages 4 and 12, and Appendix 3 pages 4 and 13.

4. Service Equity: The PD data reporting requirements are not sufficient to support comparison of response times in different neighborhoods and/or response time, presence, and availability of equivalent services for those who need wheelchair accessible vehicles. In light of the

role that vehicles with no human controls may play in the future of AVPS (and potentially in the future of service to people who use wheelchairs) the PD should be amended to report whether the vehicle has human driving controls. The PD appropriately captures the number of WAVs in operation but does not capture data necessary to understand whether service is provided in a manner equivalent to non-WAV riders. The simple addition of whether the passenger requested a WAV will allow the public to monitor whether wheelchair users receive equivalent service, in terms of response times, geographic coverage and temporal coverage. In addition, to allow for an assessment of WAV availability in relation to service available by all vehicle types we ask the Commission to require reporting of the total number of all vehicle types in service, total number of hours WAVs are available, and total number of hours for all vehicles available for passenger service in the monthly report. See Appendix 2 pages 5, 6, 13 and 14, and Appendix 3 pages 5, 6, 14 and 16.

III. THE COMMISSION MAY NOT ADOPT THE PROPOSED DECISION WITHOUT DOCUMENTING HOW IT IS SUPPORTED BY ENVIRONMENTAL REVIEW UNDER THE CALIFORNIA ENVIRONMENTAL QUALITY ACT.

The California Environmental Quality Act (Pub. Res. Code 21000 et seq. (“CEQA”)) requires that public agencies consider the environmental consequences of their decisions prior to committing to them, in order to foster informed and transparent decision-making and ensure an opportunity to avoid or minimize those impacts by identifying feasible mitigation measures and alternatives. Here, it appears that the Proposed Decision constitutes a “project” under CEQA: it is an activity undertaken by a public agency, and, by authorizing commercial deployment of AVs throughout the state, it “may cause either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment.” (CEQA § 21065.) We are aware of no available categorical or statutory exemption, and we see no indication that the Commission has conducted any CEQA analysis to support the decision, yet the decision appears to have the potential to cause significant environmental impacts.

The Proposed Decision may result in environmental impacts related to vehicle miles travelled (VMT) and GHG. CARB has identified VMT reductions necessary to meet California climate goals.¹⁶ However, in recent years, rather than decrease, VMT has increased. CARB and others have documented that TNCs caused significant increases in VMT.¹⁷ The record also shows that while it is too early to know exactly how AVs will compare to TNCs, an emerging consensus shows that without strict parameters to ensure compliance with state GHG reduction goals, AVs will likely result in increased congestion, VMT, and GHG.¹⁸ In light of this evidence, the Commission’s Proposed Decision to authorize deployment of AV passenger service statewide without incorporating state climate targets (PD 46-47) *may* lead to *significant* VMT and GHG impacts (14 California Code of Regulations § 15064.4, “CEQA Guidelines”). The Commission acknowledges that impacts *may* also result from AV deployment in other, more localized areas, when it states that “[a]s AV companies begin to deploy at scale, the Commission and local governments will have more visibility into the impacts of AVs on local streets” (PD at 49). In some areas of the state, increased congestion from AVs may cause substantial transit delay and conflicts with other modes of transportation, such as walking and bicycling. These conflicts and delays, in turn, may lead to significant transportation impacts.¹⁹ (CEQA Guidelines § 15064.3(a)). Under the circumstances, we urge the Commission to identify what environmental review supports the Proposed Decision by analyzing these and other potential impacts and identifying feasible mitigation measures or alternatives that could avoid or minimize them.

¹⁶ California’s 2017 Climate Change Scoping Plan,

https://ww3.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf, at p. 78.

¹⁷ SB 1014 Clean Miles Standard: 2018 Base-year Emissions Inventory Report, California Air Resources Board, December 2019; *see also TNCs and Congestion: Final Report*, San Francisco County Transportation Authority, October 2018, p. 21 (TNCs amount for close to 50% of the increase of VMTs in San Francisco between 2010 and 2016).

¹⁸ 2018 Progress Report; California’s Sustainable Communities and Climate Protection Act, p.83 and sources cited therein; *see also* CPUC Planning and Policy Division, *Electrifying the Ride-Sourcing Sector in California, Assessing the Opportunity*, April 2018, p. 22. *See also* comments submitted by the University of California, Davis, Policy Institute for Energy, the Environment, and the Economy on January 21, 2020, and sources cited therein; and comments submitted by The Sierra Club on February 10, 2020, and sources cited therein.

¹⁹ *See, for example, San Francisco Planning Department, Transportation Impact Analysis Guidelines for Environmental Review* (2019).

Conclusion

The City and County supports many elements of the Commission’s Proposed Decision. However, the Commission should not adopt the Proposed Decision without either allowing additional development of the record or, based on material already in the record, make the corrections identified in these comments and attached appendices. We appreciate the opportunity to provide comments on the Proposed Decision, and we look forward to further discussion with other parties.

Dated: November 4, 2020

Respectfully submitted,

By: _____
 /s/ _____
 JEFFREY P. TUMLIN
 Director of Transportation
 San Francisco Municipal Transportation Agency

By: _____
 /s/ _____
 TILLY CHANG
 Executive Director
 San Francisco County Transportation Authority

Appendix 1: Proposed Amendments: Findings of Fact

Findings of Fact¹

1. D.18-05-043 authorized a pilot test program for autonomous vehicle passenger service with drivers and a pilot program for driverless autonomous vehicle passenger service.

2. The Commission issued permits to the following parties to participate in the AV pilot programs: Zoox, Waymo, AutoX Technologies, Pony.ai, Aurora Innovation, Cruise, and Voyage Auto.

3. The seven participants in the pilot submitted data over seven quarterly reporting periods, showing that over 600,000 autonomous vehicle miles were driven.

4. The California DMV regulates the safe operation of AVs, and the Commission regulates certain for-hire transportation to provide for safety and consumer protection.

5. Division 16.6, Sections 38750-38756 of the California Vehicle Code, requires the DMV to develop regulations for the testing and public use of autonomous vehicles.

6. The DMV has divided the development of AV regulations into two phases: (1) testing, followed by (2) public use, which the DMV characterizes as deployment.

7. AV manufacturers must receive a DMV AV Testing Permit before operating Test AVs on public roads and testing must be conducted by the

¹ Note: In the original text of the PD, this section starts on page number 84.

Appendix 1: Proposed Amendments: Findings of Fact

manufacturer.

8. AV manufacturers must comply with multiple financial, insurance, operator, safety, and reporting requirements.

9. The DMV issued new draft regulations in December 2015 and held public workshops in early 2016 to continue developing regulations to address driverless AV operations.

10. The DMV noticed the formal rulemaking in March 2017, followed by amended text in October 2017 and November 2017. The most recent DMV comment period ended on December 15, 2017.

11. The DMV submitted the proposed final regulations to the OAL for final approval on January 11, 2018, and OAL approved the regulations on February 26, 2018.

12. Pursuant to Government Code Section 11343.4, the driverless AV operations regulations became effective April 1, 2018.

13. The National Highway Traffic Safety Administration has adopted automation levels developed by SAE.

14. SAE specifies six distinct levels of automation; Levels 3, 4 and 5 meet the “autonomous” standard.

15. Level 3 automation technology requires a human driver to intervene when necessary; Levels 4 and 5 are capable of driverless operation.

16. The DMV regulations define an autonomous test vehicle as one equipped

Appendix 1: Proposed Amendments: Findings of Fact

with technology that can perform the dynamic driving task but requires either a human test driver or remote operator (in the case of driverless AVs) to continuously supervise the vehicle's performance.

17. Manufacturers of test vehicles equipped with Levels 4 or 5 technologies may apply for and receive a Manufacturer's Testing Permit for Driverless Vehicles if the manufacturer certifies compliance with certain additional requirements.

18. The DMV regulations allow the Department to suspend or revoke the Manufacturer's Testing Permit of any manufacturer for any act or omission of the manufacturer or one of its agents, employees, contractors or designees which the DMV finds makes the conduct of autonomous vehicle testing on public roads by the manufacturer an unreasonable risk to the public.

19. The DMV regulations do not allow permit-holders to accept monetary compensation for rides in Test AVs.

20. The Commission regulates passenger service provided by all common carriers.

21. The Commission licenses TCPs to offer such service, develops rules and regulations for TCP permit-holders, and enforces the rules and regulations.

22. The Commission has an interest in the safety and consumer protection provided to passengers who receive passenger service in an AV, just as in all vehicles available for charter.

Appendix 1: Proposed Amendments: Findings of Fact

23. The Commission acknowledges that Public Utilities Code § 54440.5(g) states the intent of the Legislature that California be a national leader in the deployment and adoption of on-demand transportation options for persons with disabilities.

24. The Commission's TCP Permit process can accommodate the entities wishing to deploy AVs commercially.

25. Data about the operation of Drivered AV Passenger Service will be important to consider as AVs begin operation in California.

26. Data about the operation of Driverless AV Passenger Service will be important to consider as AVs begin operation in California.

Appendix 2: Proposed Amendments: Conclusions of Law

Conclusions of Law¹

1. It is reasonable for the Commission to create a drivered AV deployment program under which the Commission authorizes entities that hold a Charter-Party Carrier Class P permit to add autonomous vehicles to their passenger carrier equipment statement, where that permit-holder also holds a California Department of Motor Vehicles AV Deployment Permit and wishes to offer Drivered AV Passenger Service in California.

2. It is reasonable for the Commission to create a driverless AV deployment program under which the Commission authorizes entities that hold a Charter-Party Carrier Class P permit to add autonomous vehicles to their passenger carrier equipment statement, where that permit-holder also holds a California Department of Motor Vehicles AV Deployment Permit and wishes to offer Driverless AV Passenger Service in California.

3. It is reasonable for the Commission to adopt the following four goals that apply to both the existing pilot programs and the new deployment programs; 1.) Protect passenger safety; 2.) Expand the benefits of AV technologies to all of - California's communities-Provide equivalent service to people with disabilities, including people using wheelchairs; 3.) Improve transportation options for all, particularly for disadvantaged communities and low-income communities; and 4.) Reduce greenhouse gas emissions, **vehicle miles travelled**, criteria air pollutants, and toxic air contaminants, particularly in disadvantaged communities.

4. It is reasonable for the Commission to authorize participants in the drivered and driverless AV deployment programs to accept monetary compensation for rides in autonomous vehicles.

5. It is reasonable for the Commission to authorize participants in the drivered and driverless AV deployment programs to accept rides from more than

¹ Note: In the original text of the PD this section starts on page number 87.

Appendix 2: Proposed Amendments: Conclusions of Law

one chartering party (*i.e.*, fare-splitting and “shared rides” are permitted).

6. It is reasonable for the Commission to order that the requirements applicable to Transportation Charter-Party Carrier permit-holders participating in the deployment program for Drivered Autonomous Vehicle Passenger Service shall include:

- a. Hold and comply with all standard terms and conditions of the California Public Utilities Commission’s Transportation Charter-Party Carrier permit; including ensuring that remote operators comply with all terms and conditions applicable to drivers;
- b. Hold a California Department Motor Vehicles Autonomous Vehicle Deployment Permit and certify that the entity is in compliance with all Department of Motor Vehicles regulations;
- c. Maintain insurance for the Autonomous Vehicle offered for Drivered Autonomous Vehicle Passenger Service in compliance with Department of Motor Vehicles regulations;
- d. Conduct vehicle inspections and maintenance consistent with the requirements of the Transportation Charter-Party Carrier permit;
- e. Enroll all drivers in the Department of Motor Vehicles Employer Pull Notice Program;
- f. Show proof of compliance with Department of Motor Vehicles regulations addressing Autonomous Vehicle driver training and certification;
- g. Attest to the drivered autonomous vehicle operations of one of the entity’s vehicles that represents the vehicle and technology characterizing the fleet to be offered for the service for a minimum of 30 days on roads in California following the entity’s receipt of the Department of Motor Vehicles Autonomous Vehicle Deployment Permit, and include in the attestation:
 - i. The start date of actual operations on California roads,
 - ii. The times of day and number of hours per day in operation during the 30-day period,

Appendix 2: Proposed Amendments: Conclusions of Law

- iii. A statement and map of the Operational Design Domain as stated on the entity's Department of Motor Vehicles Autonomous Vehicle Deployment Permit,
- iv. A statement that the vehicle's 30 days of operations were conducted in the specific Operational Design Domain in which the applicant intends to pilot them for passenger service.
- h. Transmit simultaneously to the Commission all reports required by Department of Motor Vehicles regulations, including the process in the event of a collision, law enforcement interaction plan, collision reporting, disclosure to the passenger regarding collection and use of personal information, and annual Autonomous Vehicle disengagement reports;
- i. File with the Commission a plan for how the Transportation Charter-Party Carrier permit holder will provide notice to the passenger that they are receiving Drivered Autonomous Vehicle Passenger Service, and how the passenger will affirmatively consent to or decline the service;
- j. Provide to the passenger a photo of the vehicle that will provide the service during the offer/consent exchange;
- k. Transmit to the Commission quarterly reports of data about the operation of their vehicles providing Drivered AV Passenger Service. The data to be reported shall include the following:
 - i. For each trip:
 - (1). The vehicle's VIN.
 - (2). Whether the vehicle is a Plug-in Hybrid Electric Vehicle (PHEV), Battery Electric Vehicle (BEV), Fuel Cell Electric Vehicle (FCEV), or something else.
 - (3). Whether the Vehicle is a Wheelchair Accessible Vehicle (WAV).
 - (4). Whether the vehicle has human driving controls
 - (5). Vehicle occupancy, excluding employees of or contractors for the company ("Passengers").

Appendix 2: Proposed Amendments: Conclusions of Law

- (6). The date and time at which the vehicle accepted a ride.
- (7). The date and time at which the vehicle picked up the passenger.
- (8). The date and time at which the vehicle dropped off the passenger.
- (9). Vehicle miles traveled while the vehicle is neither carrying passengers nor enroute to picking up a passenger (“Period 1 VMT”).
- (10). Vehicle miles traveled between the point where the vehicle was when it accepted a trip to the point where it picked up the passenger (“Period 2 VMT”).
- (11). Vehicle miles traveled between the pick-up point and the drop-off point (“Period 3 VMT”).
- (12). The number of passengers multiplied by the number of miles traveled with those passengers in the car (“Passenger Miles Traveled”).
- (13). The census tract in which the passenger was picked up.
- (14). The census tract in which the passenger was dropped off.
- (15). The zip code in which the passenger was picked up.
- (16). The zip code in which the passenger was dropped off.
- (17). Whether the passenger requested or authorized a shared ride.
- (18). Whether the trip was a shared ride.
- (19). The fare charged for the trip. - ~~Whether the passenger was - charged a fare for the trip.~~
- (20). Whether the passenger requested a WAV.
- (21). Census tract in which the passenger submitted the trip request.
- (22). Zip code in which the passenger submitted the trip request.

Appendix 2: Proposed Amendments: Conclusions of Law

- (23). Date and time the passenger submitted the trip request.
- (24). Whether the trip request was fulfilled.
- (25). Reason / explanation for trip not being fulfilled.

ii. For each month in the reporting period:

- (1). The total amount of time vehicles waited between ending one passenger trip and initiating the next passenger trip, expressed as a monthly total in hours.
- (2). The sum of all vehicles' Period 1 VMT.
- (3). The sum of all vehicles' Period 2 VMT.
- (4). The sum of all vehicles' Period 3 VMT.
- (5). The sum of all vehicles' ZEV VMT.
- (6). The sum of all vehicles' miles driven between the storage or parking depot and the start of Period 1, and from the end of Period 3 back to the depot.
- (7). The sum of all vehicles' miles driven during mapping or testing authorized under DMV permits only, and other non-passenger service-related activities.
- (8). ~~The total number of passengers transported in passenger service.~~ The total number of passengers transported, excluding employees of or contractors for the company.
- (9). The sum of all vehicles' Passenger Miles Traveled.
- (10). For each census tract in company's operational design domain (ODD), the total number of trips that began (*i.e.*, picked up a customer) in that census tract.
- (11). For each census tract in company's ODD, the total number of trips that ended (*i.e.*, dropped off a customer) in that census tract.
- (12). Total number of Wheelchair Accessible Vehicles in service at the end of each month within the reporting period.
- (13). Total number of vehicles in service at the end of each month within the reporting period.
- (14). Total number of hours WAVs are available for passenger service.
- (15). Total number of hours for all vehicles available for passenger service.

Appendix 2: Proposed Amendments: Conclusions of Law

- (16). Total number of vehicles without human driving controls in service as of the date that the report is due.
 - (17). Total number of WAV rides requested.
 - (18). Total number of WAV rides requested but unfulfilled because no WAV was available.
 - (19). Total number of WAV rides accepted and fulfilled.
- iii. For the entire reporting period:
- (1). Total number of complaints, separated into buckets based on a template developed by CPED.
 - (2). Total number of incidents, separated into buckets based on a template developed by CPED.
 - (3). Total payouts to parties involved in incidents, if known.
 - (4). For each electric-vehicle charger used by one of the company's battery electric vehicle or plug-in hybrid electric vehicle:
 - a) The charger's location, by census tract.
 - b) The power level of the charger.
 - c) The type of charger (privately owned by company, residential, workplace, public, etc.).
 - d) Load serving entity (i.e., utility) serving the charger and its electric rate.
 - e) The time, day, and duration of each charging session.
- iv. Narrative responses to the following questions:
- (1). Is your AV service open to the general public? If not, who is eligible to participate?
 - (2). How does your AV Passenger Services provide equivalent service to people with disabilities? ~~What accessibility services does your service provide?~~ Include a description of activities to accommodate customers who use wheelchairs or are otherwise movement impaired; are blind or have other visual impairments; and any other accessible services you provide.
 - (3). How have you engaged with accessibility advocates to inform your operations?
 - (4). What actions have you taken to ensure your AV operations reduce greenhouse gas emissions and air quality hazards in California?

Appendix 2: Proposed Amendments: Conclusions of Law

- (5). How have your operations provided service to low-income communities; disadvantaged communities; and communities that are rural, speak a primary language other than English, or are otherwise hard to reach?
 - (6). How have you engaged with advocates for those communities to inform your operations?
- v. Any claimed confidentiality of the quarterly reports shall be governed by GO 66-D.
- vi. If any permit holder seeks to claim confidential treatment of their quarterly reports, the permit holder must:
- (1). Identify each page, section, or field, or any portion thereof, that it wishes to be treated as confidential.
 - (2). Specify the basis for the Commission to provide confidential treatment with specific citation to an applicable provision of the California Public Records Act. A citation or general marking of confidentiality, such as "General Order-66-D" and/or "Pub. Util. Code § 583," without additional justification is insufficient to meet the burden of proof.
 - (3). If the permit holder cites Government Code § 6255(a) (the public interest balancing test) as the basis to withhold the document from public release, then the permit-holder must demonstrate with granular specificity on the facts of the particular information why the public interest served by not disclosing the record clearly outweighs the public interest served by disclosure of the record. A private economic interest is an inadequate interest to claim in lieu of a public interest.
 - (4). If the permit holder cites Government Code § 6254(k) (which allows information to be withheld when disclosure is prohibited by federal or state law), it must cite the applicable statutory provision and explain why the specific statutory provision applies to the particular information.

Appendix 2: Proposed Amendments: Conclusions of Law

- (5). If the permit holder claims that the release of its quarterly report(s), or any part thereof, will place it an unfair business disadvantage, the permit-holder's competitor(s) must be identified and the unfair business disadvantage must be explained in detail.
 - (6). If the permit holder claims that the release of its quarterly report(s), or any part thereof, will violate a trade secret (as provided by Civil Code §§3426 through 3426.11 and Government Code §6254.7(d)), the permit-holder must establish that the annual report(s) (a) contain information including a formula, pattern, compilation, program, device, method, technique, or process; (b) derives independent economic value (actual or potential) from not being generally known to the public or to other persons who can obtain economic value; and (c) are the subject of efforts that are reasonable under the circumstances to maintain their secrecy.
 - l. Submit these reports using a template provided by the Consumer Protection and Enforcement Division.
 - m. Starting April 1, 2020, submit Quarterly Data reports on the following dates: January 1, April 1, July 1, and October 1. These reporting period for each of these submissions will be September 1 to November 30, December 1 to February 28 (February 29 in leap years), March 1 to May 31, and June 1 to August 31, respectively.
 - n. Comply with all other applicable State and Federal regulations.
 7. It is reasonable for the Commission to require that a Transportation Charter-Party Carrier permit-holder offering Drivered Autonomous Vehicle Passenger Service shall be suspended immediately from the deployment program upon suspension or revocation of their deployment permit by the California Department of Motor Vehicles and not reinstated until the Department of Motor Vehicles has reinstated the deployment permit.
 8. It is reasonable for the Commission to require that permit-holders
- 8 Appendix 1 to Comments of SFMTA-SFCTA on Proposed Decision

Appendix 2: Proposed Amendments: Conclusions of Law

participating in the driverless AV deployment program shall:

- a. Hold and comply with all standard terms and conditions of the California Public Utilities Commission's Transportation Charter-Party Carrier permit; including ensuring that remote operators comply with all terms and conditions applicable to drivers;
- b. Hold a California Department Motor Vehicles Autonomous Vehicle Deployment Permit and certify that the entity is in compliance with all Department Motor Vehicles regulations;
- c. Maintain insurance for the Autonomous Vehicle offered for Driverless Autonomous Vehicle Passenger Service in compliance with Department of Motor Vehicles regulations;
- d. Conduct vehicle inspections and maintenance consistent with the requirements of the Transportation Charter-Party Carrier permit;
- e. Enroll all remote operators that are capable of performing dynamic driving tasks in the Department of Motor Vehicles' Employer Pull Notice Program;
- f. Attest that one of the entity's vehicles that represents the vehicle and technology characterizing the fleet to be offered for the service for a minimum of 30 days on roads in California following the entity's receipt of the Department of Motor Vehicles Autonomous Vehicle Deployment Permit, and include in the attestation:
 - i. The start date of actual operations on California roads,
 - ii. The geographic location of the operations in California,
 - iii. Times of day and number of hours per day in operation during the 30-day period,
 - iv. A statement and map of the Operational Design Domain as stated on the entity's Department of Motor Vehicles test permit,
 - v. A statement that the vehicle's 30 days of operations were conducted in the specific Operational Design

Appendix 2: Proposed Amendments: Conclusions of Law

Domain in which the applicant intends to pilot them for passenger service.

- g. Transmit simultaneously to the Commission all reports required by Department of Motor Vehicles regulations, including the process in the event of a collision, law enforcement interaction plan, collision reporting, disclosure to the passenger regarding collection and use of personal information, and annual Autonomous Vehicle disengagement reports;
- h. File with the Commission a plan for how the Transportation Charter-Party Carrier permit-holder will provide notice to the passenger that they are receiving Driverless Autonomous Vehicle Passenger Service, and how the passenger will affirmatively consent to or decline the service;
- i. Provide to the passenger a photo of the vehicle that will provide the service during the offer/consent exchange; Not offer or provide passenger service operations at airports without the express authorization of both this Commission and the relevant airport authority;
- j. Ensure that the service is available only to be chartered by adults 18 years and older, and provide proof of such assurance to the Commission with their Transportation Charter-Party Carrier permit application and upon request anytime thereafter;
- k. Record all communications from the passenger in the vehicle with the remote operator while Driverless Autonomous Vehicle Passenger Service was being provided and retain the recording for one year from the date of the recording. Any and all such recordings must be provided to the Commission upon request. The claimed confidentiality of the recording or recordings shall be governed by GO 66-D;
- l. Transmit to the Commission quarterly reports of data about the operation of their vehicles providing Driverless AV Passenger Service. The data to be reported shall include the following:
 - i. For each trip:

Appendix 2: Proposed Amendments: Conclusions of Law

- (1). The vehicle's VIN.
- (2). Whether the vehicle is a Plug-in Hybrid Electric Vehicle (PHEV), Battery Electric Vehicle (BEV), Fuel Cell Electric Vehicle (FCEV), or something else.
- (3). Whether the Vehicle is a Wheelchair Accessible Vehicle (WAV).
- (4). Whether the vehicle has human driving controls.
- (5). Vehicle occupancy, excluding employees of or contractors for the company ("Passengers").
- (6). The date and time at which the vehicle accepted a ride.
- (7). The date and time at which the vehicle picked up the passenger.
- (8). The date and time at which the vehicle dropped off the passenger.
- (9). Vehicle miles traveled while the vehicle is neither carrying passengers nor enroute to picking up a passenger ("Period 1 VMT").
- (10). Vehicle miles traveled between the point where the vehicle was when it accepted a trip to the point where it picked up the passenger ("Period 2 VMT").
- (11). Vehicle miles traveled between the pick-up point and the drop-off point ("Period 3 VMT").
- (12). The number of passengers multiplied by the number of miles traveled with those passengers in the car ("Passenger Miles Traveled").
- (13). The census tract in which the passenger was picked up.
- (14). The census tract in which the passenger was dropped off.
- (15). The zip code in which the passenger was picked up.
- (16). The zip code in which the passenger was dropped off.

Appendix 2: Proposed Amendments: Conclusions of Law

- (17). Whether the passenger requested or authorized a shared ride.
 - (18). Whether the trip was a shared ride.
 - (19). ~~Whether the ride was fared.~~ The fare charged for the trip.
 - (20). Whether the passenger requested a WAV.
 - (21). Census tract in which the passenger submitted the trip request.
 - (22). Zip code in which the passenger submitted the trip request.
 - (23). Date and time the passenger submitted the trip request.
 - (24). Whether the trip request was fulfilled.
 - (25). Reason / explanation for trip not being fulfilled.
- ii. For each month in the reporting period:
- (1). The total amount of time vehicles waited between ending one passenger trip and initiating the next passenger trip, expressed as a monthly total in hours.
 - (2). The sum of all vehicles' Period 1 VMT.
 - (3). The sum of all vehicles' Period 2 VMT.
 - (4). The sum of all vehicles' Period 3 VMT.
 - (5) The sum of all vehicles' miles driven between the storage or parking depot and the start of Period 1, and from the end of Period 3 back to the depot.
 - (6)The sum of all vehicles' miles driven during mapping or testing authorized under DMV permits only, and other non-passenger service-related activities.
 - (7) The sum of all vehicles' ZEV VMT.
 - (8). The total number of passengers transported, excluding employees of or contractors for the company.

Appendix 2: Proposed Amendments: Conclusions of Law

- (9). The sum of all vehicles' Passenger Miles Traveled.
- (10). For each census tract in company's operational design domain (ODD), the total number of trips that began (*i.e.*, picked up a customer) in that census tract.
- (11). For each census tract in company's ODD, the total number of trips that ended (*i.e.*, dropped off a customer) in that census tract.
- (12). Total number of WAV in service at the end of each month within the reporting period.
- (13). Total number of vehicles in service at the end of each month within the reporting period.
- (14). Total number of hours WAVs are available for passenger service
- (15). Total number of hours for all vehicles available for passenger service
- (16). Total number vehicles without human controls in service as of the date that the report is due.
- (17). Total number of WAV rides requested.
- (18). Total number of WAV rides requested but unfulfilled because no WAV was available.
- (19). Total number of WAV rides accepted and fulfilled.
- (20). For each electric-vehicle charger used by one of the company's battery electric vehicle or plug-in hybrid electric vehicle:
 - a) The charger's location, by census tract.
 - b) The power level of the charger.
 - c) The type of charger (privately owned by company, residential, workplace, public, etc.).
 - d) Load serving entity (*i.e.*, utility) serving the charger and its electric rate.

Appendix 2: Proposed Amendments: Conclusions of Law

- e) The time, day, and duration of each charge.
- iii. For the entire quarter:
 - (1). Total number of complaints, separated into buckets based on a template developed by CPED.
 - (2). Total number of incidents, separated into buckets based on a template developed by CPED.
 - (3). Total payouts to parties involved in incidents, if known.
- iv. Narrative responses to the following questions:
 - (1) Is your AV service open to the general public? If not, who is eligible to participate?
 - (2). How does your AV Passenger Services provide equivalent service to people with disabilities? ~~What accessibility services does your service provide?~~ Include a description of activities to accommodate customers who use wheelchairs or are otherwise movement impaired; are blind or have other visual impairments; and any other accessible services you provide.
 - (3). How have you engaged with accessibility advocates to inform your operations?
 - (4). What actions have you taken to ensure your AV operations reduce greenhouse gas emissions and air quality hazards in California?
 - (5). How have your operations provided service to low-income communities; disadvantaged communities; and communities that are rural, speak a primary language other than English, or are otherwise hard to reach?
 - (6). How have you engaged with advocates for those communities to inform your operations?
- v. Any claimed confidentiality of the quarterly reports shall be governed by GO 66-D. If any permit-holder seeks to claim confidential treatment of their

Appendix 2: Proposed Amendments: Conclusions of Law

quarterly reports, the permit-holder must:

- (1). Identify each page, section, or field, or any portion thereof, that it wishes to be treated as confidential.
- (2). Specify the basis for the Commission to provide confidential treatment with specific citation to an applicable provision of the California Public Records Act. A citation or general marking of confidentiality, such as "General Order-66-D" and/or "Pub. Util. Code § 583," without additional justification is insufficient to meet the burden of proof.
- (3). If the permit holder cites Government Code § 6255(a) (the public interest balancing test) as the basis to withhold the document from public release, then the permit-holder must demonstrate with granular specificity on the facts of the particular information why the public interest served by not disclosing the record clearly outweighs the public interest served by disclosure of the record. A private economic interest is an inadequate interest to claim in lieu of a public interest.
- (4). If the permit holder cites Government Code § 6254(k) (which allows information to be withheld when disclosure is prohibited by federal or state law), it must cite the applicable statutory provision and explain why the specific statutory provision applies to the particular information.
- (5). If the permit holder claims that the release of its quarterly report(s), or any part thereof, will place it an unfair business disadvantage, the permit-holder's competitor(s) must be identified and the unfair business disadvantage must be explained in detail.
- (6). If the permit holder claims that the release of its quarterly report(s), or any part thereof, will violate a trade secret (as provided by Civil Code §§3426 through 3426.11 and Government Code

Appendix 2: Proposed Amendments: Conclusions of Law

§6254.7(d)), the permit holder must establish that the annual report(s) (a) contain information including a formula, pattern, compilation, program, device, method, technique, or process; (b) derives independent economic value (actual or potential) from not being generally known to the public or to other persons who can obtain economic value; and (c) are the subject of efforts that are reasonable under the circumstances to maintain their secrecy.

- m. Submit these reports using a template provided by the Consumer Protection and Enforcement Division.
- n. Starting April 1, 2020, submit Quarterly Data reports on the following dates: January 1, April 1, July 1, and October 1. These reporting period for each of these submissions will be September 1 to November 30, December 1 to February 28 (February 29 in leap years), March 1 to May 31, and June 1 to August 31, respectively.
- o. Comply with all other applicable State and Federal regulations.

9. It is reasonable for the Commission to require Transportation Charter-Party Carrier permit-holders that wish to participate in the deployment program for Driverless Autonomous Vehicle Passenger Service to transmit a Passenger Safety Plan that describes their policies and procedures to minimize risk for all passengers in their driverless vehicles. The Passenger Safety Plan must, at minimum, detail how the applicant will: minimize safety risks to passengers traveling in a ride operated without a driver in the vehicle; minimize safety risks to passengers traveling in a shared, driverless ride, including prevention and response to assaults and harassments; respond to unsafe scenarios outside and within the vehicle, such as hostile individuals; educate and orient passengers about the technology, experience, and safety procedures; ensure customers can safely identify, enter, and exit the AV they requested; enable passengers to contact the AV service provider during the ride and to ensure the passengers receive a timely and complete response; collect, respond to, and retain any passenger comments and complaints;

Appendix 2: Proposed Amendments: Conclusions of Law

and ensure the safety measures described above are accessible to and apply to all passengers, including those with limited mobility, vision impairments, or other disabilities.

10. It is reasonable for the Commission to require the Passenger Safety Plan to include the anticipated response time to passenger requests to contact the AV service provider.

11. It is reasonable for the Commission to require the Passenger Safety Plan to also include the applicant's written COVID-19 Emergency Plan as required by Resolution TL-19131. As required in Resolution TL-19131, the permit-holders must follow the CDC guidelines and the CDPH Guidance on preventing the transmission of COVID-19, and any revisions and/or updates to those guidelines, as practicable.

12. It is reasonable for the Commission to require the submission of the following additional plans:

- a. Disability Access Plan: shall detail how the applicant plans to deliver equivalent service to persons with disabilities, including individuals using non-folding wheelchairs. At a minimum, the Plan should:
 - (1). Describe any features of the applicant's service plans, product designs, passenger interfaces, vehicle design, payment methods, and policies and procedures that will be accessible upon deployment.
 - (2). Explain initiatives that remain under development, including which barriers to people with disabilities permit holders will address during deployment, including an anticipated timeline for completion.
 - (3). Detail how the applicant will continuously seek input from persons with disabilities and strive to broaden access and address barriers as they are identified.

Appendix 2: Proposed Amendments: Conclusions of Law

b.Climate Air Quality and Climate Plan: shall detail how the applicant plans to minimize deadheading and vehicle miles traveled; minimize congestion through innovative strategies that connect people to high occupancy modes of transportation including transit, minimize the operations of vehicles that burn fossil fuels, and encourage ride-sharing in the proposed Operational Design Domain(s) for which the permit holder is operating to ensure that that AV Passenger Service reduces greenhouse gas emissions, vehicle miles travelled, criteria air pollutants, and toxic air containments, particularly in Disadvantaged Communities.

c.Equity Plan: shall detail how the applicant plans to ensure equitable service to: to low-income communities; disadvantaged communities; and communities that are rural, speak a primary language other than English, or are otherwise hard to reach and minimizing the potential negative effects impacts of AVPS.

13. It is reasonable for the Commission's Consumer Protection and Enforcement Division staff to plan to hold a workshop on passenger service provided by participants within one year following the issuance of this decision.

14. It is reasonable for the Commission to require that a Transportation Charter-Party Carrier permit-holder offering Driverless Autonomous Vehicle Passenger Service shall be suspended immediately from the deployment program upon suspension or revocation of their testing permit by the California Department of Motor Vehicles and not reinstated until the Department of Motor Vehicles has reinstated the testing permit.

15. It is reasonable for the Commission to require that, starting April 1, 2020, participants in both the drivered and driverless AV pilot programs submit their quarterly data reports on the following dates: January 1, April 1, July 1, and October 1. These reporting period for each of these submissions will be September 1 to November 30, December 1 to February 28 (February 29 in

Appendix 2: Proposed Amendments: Conclusions of Law

leap years), March 1 to May 31, and June 1 to August 31, respectively.

16. It is reasonable for the Commission to require that participants in the Commission's AV Pilot Programs must now report the following information as part of their Quarterly Pilot Data Reports:

- a. Total number of WAV rides requested.
- b. Total number of WAV rides requested but unfulfilled because no WAV was available.
- c. Total number of WAV rides requested but unfulfilled because the vehicle operator declined the request.
- d. Total number of WAV rides accepted and fulfilled.

17. It is reasonable for the Commission to determine that participants in the Commission's AV Pilot Programs are no longer required to report the following information as part of their Quarterly Pilot Data Reports:

- a. Total number of accessible rides requested per quarter that are fulfilled.
- b. Total number of accessible rides requested per quarter that are unfulfilled because of a lack of accessible vehicles.
- c. Total number of accessible rides requested per quarter that are declined by the driver.

18. It is reasonable for the Commission to, except for the changes described above, maintain the same data reporting requirements for the AV pilot programs.

19. It is reasonable for the Commission to require that an entity seeking to participate in the driverless deployment program shall submit to the Director of CPED an application for a permit in the form of a Tier 3 Advice Letter. The application process should be modeled on the General Rules of GO 96-B. GO 96-B provides a procedural vehicle by which an entity seeks a Commission order that the requested relief is consistent with Commission policy and applicable law. The permit application will demonstrate compliance with G.O. 157-E; be in conformance with all service requirements in GO 96-B using all of the Transportation Network

Appendix 2: Proposed Amendments: Conclusions of Law

Company rulemakings service lists; include all the information required by this Decision, particularly the Passenger Safety Plan, the Disability Access plan, the Air Quality and Climate Plan, and the Equity Plan as specified in Ordering Paragraphs 8, 11-13 -; the DMV deployment permit; and an expanded data reporting plan. CPED staff will review each application and prepare a draft resolution recommending appropriate disposition of each application for a Commission resolution. All appeals of resolutions shall take the form of an application for rehearing pursuant to GO 96-B.

20. It is reasonable for the Commission to require that entities may apply to offer driverless service with or without shared rides. If an entity applies to offer driverless service without shared rides, its Passenger Safety Plan need not describe how it will minimize safety risks to passengers traveling in shared, driverless rides.

21. It is reasonable for the Commission to require that If an entity authorized to participate in the driverless deployment program subsequently wishes to provide shared rides using driverless AVs, the request shall be made in the form of an Advice Letter that revises the carrier's Passenger Safety Plan to include the required content related to shared rides. CPED staff will review each Advice Letter and prepare a draft resolution recommending appropriate disposition on the revised Passenger Safety Plan to provide shared rides for a Commission decision. Relatedly, if an entity authorized to participate in the driverless deployment program intends to changes its operations in a way that would materially affect the approaches outlined in its Passenger Safety Plan, that entity should provide the Director of CPED with an updated Passenger Safety Plan by way of a Tier 2 Advice Letter.

Appendix 3: Proposed Amendments: Order

O R D E R¹

IT IS ORDERED that:

1. The Commission creates a drivered Autonomous Vehicle (AV) deployment program under which the Commission authorizes entities that hold a Charter-Party Carrier Class P permit to add autonomous vehicles to their passenger carrier equipment statement, where that permit-holder also holds a California Department of Motor Vehicles AV Deployment Permit and wishes to offer Drivered AV Passenger Service in California.

2. The Commission creates a driverless Autonomous Vehicle (AV) deployment program under which the Commission authorizes entities that hold a Charter-Party Carrier Class P permit to add autonomous vehicles to their passenger carrier equipment statement, where that permit-holder also holds a California Department of Motor Vehicles AV Deployment Permit and wishes to offer Driverless AV Passenger Service in California.

3. Participants in the drivered and driverless Autonomous Vehicle deployment programs may accept monetary compensation for rides in autonomous vehicles.

4. Participants in the Drivered and Driverless Autonomous Vehicles Deployment Programs may accept rides from more than one chartering party (*i.e.*, fare-splitting and “shared rides” are permitted).

5. The requirements applicable to Transportation Charter-Party Carrier permit-holders participating in the deployment program for Drivered Autonomous Vehicle Passenger Service shall include but are not limited to:

- a. Hold and comply with all standard terms and conditions of the California Public Utilities Commission’s Transportation Charter-Party Carrier permit; including

¹ Note: In the original text of the PD this section starts on page number 106.

Appendix 3: Proposed Amendments: Order

- ensuring that remote operators comply with all terms and conditions applicable to drivers;
- b. Hold a California Department Motor Vehicles Autonomous Vehicle Deployment Permit and certify that the entity is in compliance with all Department Motor Vehicles regulations;
 - c. Maintain insurance for the Autonomous Vehicle offered for Drivered Autonomous Vehicle Passenger Service in compliance with Department of Motor Vehicles regulations;
 - d. Conduct vehicle inspections and maintenance consistent with the requirements of the Transportation Charter-Party Carrier permit;
 - e. Enroll all drivers in the Department of Motor Vehicles Employer Pull Notice Program;
 - f. Show proof of compliance with Department of Motor Vehicles regulations addressing Autonomous Vehicle driver training and certification;
 - g. Attest that one of the entity's vehicles that represents the vehicle and technology characterizing the fleet to be offered for the service for a minimum of 30 days on roads in California following the entity's receipt of the Department of Motor Vehicles Autonomous Vehicle Deployment Permit, and include in the attestation:
 - i. The start date of actual operations on California roads,
 - ii. The times of day and number of hours per day in operation during the 30-day period,
 - iii. A statement and map of the Operational Design Domain as stated on the entity's Department of Motor Vehicles Autonomous Vehicle Deployment Permit,
 - iv. A statement that the vehicle's 30 days of operations were conducted in the specific Operational Design Domain in which the applicant intends to pilot them for passenger service.

Appendix 3: Proposed Amendments: Order

- h. Transmit simultaneously to the Commission all reports required by Department of Motor Vehicles regulations, including the process in the event of a collision, law enforcement interaction plan, collision reporting, disclosure to the passenger regarding collection and use of personal information, and annual Autonomous Vehicle disengagement reports;
- i. File with the Commission a plan for how the Transportation Charter-Party Carrier permit-holder will provide notice to the passenger that they are receiving Drivered Autonomous Vehicle Passenger Service, and how the passenger will affirmatively consent to or decline the service;
- j. Provide to the passenger a photo of the vehicle that will provide the service during the offer/consent exchange;
- k. Transmit to the Commission quarterly reports of data about the operation of their vehicles providing Drivered AV Passenger Service. The data to be reported shall include the following:
 - i. For each trip:
 - (1). The vehicle's VIN.
 - (2). Whether the vehicle is a Plug-in Hybrid Electric Vehicle (PHEV), Battery Electric Vehicle (BEV), Fuel Cell Electric Vehicle (FCEV), or something else.
 - (3). Whether the vehicle is a Wheelchair Accessible Vehicle (WAV).
 - (4). Whether the vehicle has human driving controls.
 - (5). Vehicle occupancy, excluding employees of or contractors for the company ("Passengers").
 - (6). The date and time at which the vehicle accepted a ride.
 - (7). The date and time at which the vehicle picked up the passenger.
 - (8). The date and time at which the vehicle

Appendix 3: Proposed Amendments: Order

dropped off the passenger.

- (9). Vehicle miles traveled while the vehicle is neither carrying passengers nor enroute to picking up a passenger (Period 1 VMT).
- (10). Vehicle miles traveled between the point where the vehicle was when it accepted a trip to the point where it picked up the passenger (Period 2 VMT).
- (11). Vehicle miles traveled between the pick-up point and the drop-off point (Period 3 VMT).
- (12). The number of passengers multiplied by the number of miles traveled with those passengers in the car (Passenger Miles Traveled).
- (13). The census tract in which the passenger was picked up.
- (14). The census tract in which the passenger was dropped off.
- (15). The zip code in which the passenger was picked up.
- (16). The zip code in which the passenger was dropped off.
- (17). Whether the passenger requested or authorized a shared ride.
- (18). Whether the trip was a shared ride.
- (19). The fare charged for the trip. ~~Whether the passenger was charged a fare for the trip.~~
- (20). Whether the passenger requested a WAV.
- (21). Census tract in which the passenger submitted the trip request.

Appendix 3: Proposed Amendments: Order

- (22). Zip code in which the passenger submitted the trip request.
- (23). Date and time the passenger submitted the trip request.
- (24). Whether the trip request was fulfilled.
- (25). Reason / explanation for trip not being fulfilled.
 - ii. For each month in the reporting period:
 - (1). The total amount of time vehicles waited between ending one passenger trip and initiating the next passenger trip, expressed as a monthly total in hours.
 - (2). The sum of all vehicles' Period 1 VMT.
 - (3). The sum of all vehicles' Period 2 VMT.
 - (4). The sum of all vehicles' Period 3 VMT.
 - (5) The sum of all vehicles' ZEV VMT.
 - (6) The sum of all vehicles' miles driven between the storage or parking depot and the start of Period 1, and from the end of Period 3 back to the depot.
 - (7)The sum of all vehicles' miles driven during mapping or testing authorized under DMV permits only, and other non-passenger service-related activities.
 - (8)~~The total number of passengers transported in passenger service.~~ The total number of passengers transported, excluding employees of

Appendix 3: Proposed Amendments: Order

or contractors for the company.

- (9). The sum of all vehicles' Passenger Miles Traveled.
 - (10). For each census tract in company's operational design domain (ODD), the total number of trips that began (*i.e.*, picked up a customer) in that census tract.
 - (11). For each census tract in company's ODD, the total number of trips that ended (*i.e.*, dropped off a customer) in that census tract.
 - (12). Total number of Wheelchair Accessible Vehicles in service at the end of each month within the reporting period.
 - (13). Total number of vehicles in service at the end of each month within the reporting period.
 - (14). Total number of hours WAVs are available for passenger service.
 - (15). Total number of hours for all vehicles available for passenger service.
 - (16). Total number of vehicles without human controls in service as of the date that the report is due.
 - (17). Total number of WAV rides requested.
 - (18). Total number of WAV rides requested but unfulfilled because no WAV was available.
 - (19). Total number of WAV rides accepted and fulfilled.
- iii. For the entire reporting period:
- (1). Total number of complaints, separated into buckets based on a template developed by the Consumer Protection and Enforcement Division (CPED).

Appendix 3: Proposed Amendments: Order

- (2). Total number of incidents, separated into buckets based on a template developed by CPED.
 - (3). Total payouts to parties involved in incidents, if known.
 - (4). For each electric-vehicle charger used by one of the company's battery electric vehicle or plug-in hybrid electric vehicle:
 - a) The charger's location, by census tract.
 - b) The power level of the charger.
 - c) The type of charger (privately owned by company, residential, workplace, public, etc.).
 - d) Load serving entity (*i.e.*, utility) serving the charger and its electric rate.
 - e) The time, day, and duration of each charge.
- iv. Narrative responses to the following questions:
- (1). Is your AV service open to the general public? If not, who is eligible to participate?
 - (2). How does your AV Passenger Services provide equivalent service to people with disabilities? ~~What accessibility services does your service provide?~~ Include a description of activities to accommodate customers who use wheelchairs or are otherwise movement impaired; are blind or have other visual impairments; and any other accessible services you provide.
 - (3). How have you engaged with accessibility advocates to inform your operations?
 - (4). What actions have you taken to ensure your AV operations reduce greenhouse gas emissions and air quality hazards in California?
 - (5). How have your operations provided service to low-income communities; disadvantaged communities; and communities that are rural,

Appendix 3: Proposed Amendments: Order

- speak a primary language other than English, or are otherwise hard to reach?
- (6). How have you engaged with advocates for those communities to inform your operations?
 - v. Any claimed confidentiality of the quarterly reports shall be governed by General Order 66-D.
 - vi. If any permit holder seeks to claim confidential treatment of their quarterly reports, the permit holder must:
 - (1). Identify each page, section, or field, or any portion thereof, that it wishes to be treated as confidential.
 - (2). Specify the basis for the Commission to provide confidential treatment with specific citation to an applicable provision of the California Public Records Act. A citation or general marking of confidentiality, such as "General Order 66-D" and/or "Pub. Util. Code § 583," without additional justification is insufficient to meet the burden of proof.
 - (3). If the permit holder cites Government Code § 6255(a) (the public interest balancing test) as the basis to withhold the document from public release, then the permit-holder must demonstrate with granular specificity on the facts of the particular information why the public interest served by not disclosing the record clearly outweighs the public interest served by disclosure of the record. A private economic interest is an inadequate interest to claim in lieu of a public interest.
 - (4). If the permit holder cites Government Code § 6254(k) (which allows information to be withheld when disclosure is prohibited by federal or state law), it must cite the applicable statutory provision and explain why the specific statutory provision applies to the particular

Appendix 3: Proposed Amendments: Order

information.

- (5). If the permit holder claims that the release of its quarterly report(s), or any part thereof, will place it an unfair business disadvantage, the permit-holder's competitor(s) must be identified and the unfair business disadvantage must be explained in detail.
 - (6). If the permit holder claims that the release of its quarterly report(s), or any part thereof, will violate a trade secret (as provided by Civil Code §§ 3426 through 3426.11 and Government Code § 6254.7(d)), the permit-holder must establish that the annual report(s) (a) contain information including a formula, pattern, compilation, program, device, method, technique, or process; (b) derives independent economic value (actual or potential) from not being generally known to the public or to other persons who can obtain economic value; and (c) are the subject of efforts that are reasonable under the circumstances to maintain their secrecy.
 - l. Submit these reports using a template provided by the Consumer Protection and Enforcement Division.
 - m. Starting April 1, 2020, submit Quarterly Data reports on the following dates: January 1, April 1, July 1, and October 1. These reporting period for each of these submissions will be September 1 to November 30, December 1 to February 28 (February 29 in leap years), March 1 to May 31, and June 1 to August 31, respectively.
 - n. Comply with all other applicable State and Federal regulations.
6. A Transportation Charter-Party Carrier permit holder offering Drivered Autonomous Vehicle Passenger Service shall be suspended immediately from the deployment program upon suspension or revocation of their deployment permit by the California Department of Motor Vehicles and not reinstated until

Appendix 3: Proposed Amendments: Order

the Department of Motor Vehicles has reinstated the deployment permit.

7. Permit-holders participating in the driverless AV deployment program shall:

- a. Hold and comply with all standard terms and conditions of the California Public Utilities Commission's Transportation Charter-Party Carrier permit; including ensuring that remote operators comply with all terms and conditions applicable to drivers;
- b. Hold a California Department Motor Vehicles Autonomous Vehicle Deployment Permit and certify that the entity is in compliance with all Department of Motor Vehicles regulations;
- c. Maintain insurance for the Autonomous Vehicle offered for Driverless Autonomous Vehicle Passenger Service in compliance with Department of Motor Vehicles regulations;
- d. Conduct vehicle inspections and maintenance consistent with the requirements of the Transportation Charter-Party Carrier permit;
- e. Enroll all remote operators that are capable of performing dynamic driving tasks in the Department of Motor Vehicles' Employer Pull Notice Program;
- f. Attest that one of the entity's vehicles that represents the vehicle and technology characterizing the fleet to be offered for the service for a minimum of 30 days on roads in California following the entity's receipt of the Department of Motor Vehicles Autonomous Vehicle Deployment Permit, and include in the attestation:
 - i. The start date of actual operations on California roads,
 - ii. The geographic location of the operations in California,
 - iii. Times of day and number of hours per day in operation during the 30-day period,
 - iv. A statement and map of the Operational Design

Appendix 3: Proposed Amendments: Order

Domain as stated on the entity's Department of Motor Vehicles test permit,

- v. A statement that the vehicle's 30 days of operations were conducted in the specific Operational Design Domain in which the applicant intends to pilot them for passenger service.
- g. Transmit simultaneously to the Commission all reports required by Department of Motor Vehicles regulations, including the process in the event of a collision, law enforcement interaction plan, collision reporting, disclosure to the passenger regarding collection and use of personal information, and annual Autonomous Vehicle disengagement reports;
- h. File with the Commission a plan for how the Transportation Charter-Party Carrier permit-holder will provide notice to the passenger that they are receiving Driverless Autonomous Vehicle Passenger Service, and how the passenger will affirmatively consent to or decline the service;
- i. Provide to the passenger a photo of the vehicle that will provide the service during the offer/consent exchange;
- j. Not offer or provide passenger service operations at airports without the express authorization of both this Commission and the relevant airport authority;
- k. Ensure that the service is available only to be chartered by adults 18 years and older, and provide proof of such assurance to the Commission with their Transportation Charter-Party Carrier permit application and upon request anytime thereafter;
- l. Record all communications from the passenger in the vehicle with the remote operator while Driverless Autonomous Vehicle Passenger Service was being provided and retain the recording for one year from the date of the recording. Any and all such recordings must be provided to the Commission upon request. The claimed confidentiality of the recording or recordings shall be governed by General Order (GO) 66-D;

Appendix 3: Proposed Amendments: Order

- m. Transmit to the Commission quarterly reports of data about the operation of their vehicles providing Driverless AV Passenger Service. The data to be reported shall include the following:
 - i. For each trip:
 - (1). The vehicle's VIN.
 - (2). Whether the vehicle is a Plug-in Hybrid Electric Vehicle (PHEV), Battery Electric Vehicle (BEV), Fuel Cell Electric Vehicle (FCEV), or something else.
 - (3). Whether the Vehicle is a Wheelchair Accessible Vehicle (WAV).
 - (4). Whether the vehicle has human driving controls.
 - (5). Vehicle occupancy, excluding employees of or contractors for the company (passengers).
 - (6). The date and time at which the vehicle accepted a ride.
 - (7). The date and time at which the vehicle picked up the passenger.
 - (8). The date and time at which the vehicle dropped off the passenger.
 - (9). Vehicle miles traveled while the vehicle is neither carrying passengers nor enroute to picking up a passenger (Period 1 VMT).
 - (10). Vehicle miles traveled between the point where the vehicle was when it accepted a trip to the point where it picked up the passenger (Period 2 VMT).
 - (11). Vehicle miles traveled between the pick-up point and the drop-off point (Period 3 VMT).
 - (12). The number of passengers multiplied by the number of miles traveled with those passengers

Appendix 3: Proposed Amendments: Order

in the car (Passenger Miles Traveled).

- (13). The census tract in which the passenger was picked up.
- (14). The census tract in which the passenger was dropped off.
- (15). The zip code in which the passenger was picked up.
- (16). The zip code in which the passenger was dropped off.
- (17). Whether the passenger requested or authorized a shared ride.
- (18). Whether the trip was a shared ride.
- (19). ~~Whether the ride was fared.~~ The fare charged for the trip.
- (20). Whether the passenger requested a WAV.
- (21). Census tract in which the passenger submitted the trip request.
- (22). Zip code in which the passenger submitted the trip request.
- (23). Date and time the passenger submitted the trip request.
- (24). Whether the trip request was fulfilled.
- (25). Reason / explanation for trip not being fulfilled.

ii. For each month in the reporting period:

- (1). The total amount of time vehicles waited between ending one passenger trip and initiating the next passenger trip, expressed as a monthly total in hours.
- (2). The sum of all vehicles' Period 1 VMT.
- (3). The sum of all vehicles' Period 2 VMT.
- (4). The sum of all vehicles' Period 3 VMT.

Appendix 3: Proposed Amendments: Order

- (5). The sum of all vehicles' miles driven between the storage or parking depot and the start of Period 1, and from the end of Period 3 back to the depot.
- (6). The sum of all vehicles' miles driven during mapping or testing authorized under DMV permits only, and other non-passenger service-related activities.
- (7). The sum of all vehicles' ZEV VMT.
- (8). The total number of passengers transported, excluding employees of or contractors for the company.
- (9). The sum of all vehicles' Passenger Miles Traveled.
- (10). For each census tract in company's operational design domain (ODD), the total number of trips that began (*i.e.*, picked up a customer) in that census tract.
- (11). For each census tract in company's ODD, the total number of trips that ended (*i.e.*, dropped off a customer) in that census tract.
- (12). Total number of Wheelchair Accessible Vehicles (WAV) in service at the end of each month within the reporting period.
- (13). Total number of vehicles in service at the end of each month within the reporting period.
- (14). Total number of hours WAVs are available for passenger service
- (15). Total number of hours for all vehicles available for passenger service
- (16). Total number of vehicles without human controls in service as of the date that the report is due.

Appendix 3: Proposed Amendments: Order

- (17). Total number of WAV rides requested.
- (18). Total number of WAV rides requested but unfulfilled because no WAV was available.
- (19.) Total number of WAV rides accepted and fulfilled.
- (20.) For each electric-vehicle charger used by one of the company's battery electric vehicle or plug-in hybrid electric vehicle:
 - a. The charger's location, by census tract.
 - b. The power level of the charger.
 - c. The type of charger (privately owned by company, residential, workplace, public, etc.).
 - d. Load serving entity (*i.e.*, utility) serving the charger and its electric rate.
 - e. The time, day, and duration of each charge.
- iii. For the entire quarter:
 - (1). Total number of complaints, separated into buckets based on a template developed by the Consumer Protection and Enforcement Division (CPED).
 - (2). Total number of incidents, separated into buckets based on a template developed by CPED.
 - (3). Total payouts to parties involved in incidents, if known.
- iv. Narrative responses to the following questions:
 - (1). Is your AV service open to the general public? If not, who is eligible to participate?
 - (2). How does your AV Passenger Services provide equivalent service to people with disabilities? ~~What accessibility services does your service provide?~~ Include a description of activities to accommodate customers who use wheelchairs or are otherwise movement impaired; are blind or have other visual impairments; and any other accessible services you provide.
 - (3). How have you engaged with accessibility

Appendix 3: Proposed Amendments: Order

- advocates to inform your operations?
- (4). What actions have you taken to ensure your AV operations reduce greenhouse gas emissions and air quality hazards in California?
 - (5). How have your operations provided service to low-income communities; disadvantaged communities; and communities that are rural, speak a primary language other than English, or are otherwise hard to reach?
 - (6). How have you engaged with advocates for those communities to inform your operations?
- v. Any claimed confidentiality of the quarterly reports shall be governed by GO 66-D. If any permit-holder seeks to claim confidential treatment of their quarterly reports, the permit-holder must:
- (1). Identify each page, section, or field, or any portion thereof, that it wishes to be treated as confidential.
 - (2). Specify the basis for the Commission to provide confidential treatment with specific citation to an applicable provision of the California Public Records Act. A citation or general marking of confidentiality, such as "General Order 66- D" and/or "Pub. Util. Code § 583," without additional justification is insufficient to meet the burden of proof.
 - (3). If the permit holder cites Government Code § 6255(a) (the public interest balancing test) as the basis to withhold the document from public release, then the permit-holder must demonstrate with granular specificity on the facts of the particular information why the public interest served by not disclosing the record clearly outweighs the public interest served by disclosure of the record. A private economic interest is an inadequate interest to claim in lieu of a public interest.

Appendix 3: Proposed Amendments: Order

- (4). If the permit holder cites Government Code § 6254(k) (which allows information to be withheld when disclosure is prohibited by federal or state law), it must cite the applicable statutory provision and explain why the specific statutory provision applies to the particular information.
 - (5). If the permit holder claims that the release of its quarterly report(s), or any part thereof, will place it an unfair business disadvantage, the permit-holder's competitor(s) must be identified and the unfair business disadvantage must be explained in detail.
 - (6). If the permit holder claims that the release of its quarterly report(s), or any part thereof, will violate a trade secret (as provided by Civil Code §§3426 through 3426.11 and Government Code §6254.7(d), the permit holder must establish that the annual report(s) (a) contain information including a formula, pattern, compilation, program, device, method, technique, or process; (b) derives independent economic value (actual or potential) from not being generally known to the public or to other persons who can obtain economic value; and (c) are the subject of efforts that are reasonable under the circumstances to maintain their secrecy.
- n. Submit these reports using a template provided by the Consumer Protection and Enforcement Division.
 - o. Starting April 1, 2020, submit Quarterly Data reports on the following dates: January 1, April 1, July 1, and October 1. These reporting period for each of these submissions will be September 1 to November 30, December 1 to February 28 (February 29 in leap years), March 1 to May 31, and June 1 to August 31, respectively.
 - p. Comply with all other applicable State and Federal regulations.
8. Transportation Charter-Party Carrier permit-holders that wish to

Appendix 3: Proposed Amendments: Order

participate in the deployment program for Driverless Autonomous Vehicle Passenger Service must transmit a Passenger Safety Plan that describes their policies and procedures to minimize risk for all passengers in their driverless vehicles. The Passenger Safety Plan must, at minimum, detail how the applicant will: minimize safety risks to passengers traveling in a ride operated without a driver in the vehicle; minimize safety risks to passengers traveling in a shared, driverless ride, including prevention and response to assaults and harassments; respond to unsafe scenarios outside and within the vehicle, such as hostile individuals; educate and orient passengers about the technology, experience, and safety procedures; ensure customers can safely identify, enter, and exit the AV they requested; enable passengers to contact the AV service provider during the ride and to ensure the passengers receive a timely and complete response; collect, respond to, and retain any passenger comments and complaints; and ensure the safety measures described above are accessible to and apply to all passengers, including those with limited mobility, vision impairments, or other disabilities.

9. Transportation Charter-Party Carriers' Passenger Safety Plans must include the applicant's anticipated response time to passenger requests to contact the AV service provider.

10. Transportation Charter-Party Carriers' Passenger Safety Plans must include the applicant's written COVID-19 Emergency Plan as required by Resolution TL-19131. As required in Resolution TL-19131, the permit-holders must follow the CDC guidelines and the CDPH Guidance on preventing the transmission of COVID-19, and any revisions and/or updates to those guidelines, as practicable.

11. Transportation Charter-Party Carrier permit-holders that wish to participate in the deployment program for Driverless Autonomous Vehicle

Appendix 3: Proposed Amendments: Order

Passenger Service must transmit a **Disability Access Plan** that shall detail how the applicant plans to deliver equivalent service to persons with disabilities, including individuals using non-folding wheelchairs. At a minimum, the Plan should:

- a. Describe any features of the applicant's service plans, product designs, passenger interfaces, vehicle design, payment methods, and policies and procedures that will be accessible upon deployment.
- b. Explain initiatives that remain under development, including which barriers to people with disabilities permit holders will address during deployment, including an anticipated timeline for completion.
- c. Detail how the applicant will continuously seek input from persons with disabilities and strive to broaden access and address barriers as they are identified.

12. Transportation Charter-Party Carrier permit-holders that wish to participate in the deployment program for Driverless Autonomous Vehicle Passenger Service must transmit an **Air Quality and Climate Protection Plan** that details how the applicant plans to minimize deadheading and vehicle miles traveled; minimize congestion through innovative strategies that connect people to high occupancy modes of transportation including transit, minimize the operations of vehicles that burn fossil fuels, and encourage ride-sharing in the proposed Operational Design Domain(s) for which the permit holder is operating to ensure that that AV Passenger Service reduces greenhouse gas emissions, vehicle miles travelled, criteria air pollutants, and toxic air containments, particularly in Disadvantaged Communities.

13. Transportation Charter-Party Carrier permit-holders that wish to participate

Appendix 3: Proposed Amendments: Order

in the deployment program for Driverless Autonomous Vehicle Passenger Service must transmit an **Equity Plan** that shall detail how the applicant plans to ensure equitable service to: to low-income communities; disadvantaged communities; and communities that are rural, speak a primary language other than English, or are otherwise hard to reach and minimizing the potential negative effects impacts of AVPS.

14. An entity seeking to participate in the driverless deployment program shall submit to the Director of the Consumer Protection and Enforcement Division an application in the form of an Advice Letter for a permit to operate a driverless AV (Permit Application) in the manner set forth in Ordering Paragraph 18.

15. The Commission's Consumer Protection and Enforcement Division staff is authorized to hold a workshop on passenger service provided by participants within one year following the issuance of this decision.

16. A Transportation Charter-Party Carrier permitholder offering Driverless Autonomous Vehicle Passenger Service shall be suspended immediately from the deployment program upon suspension or revocation of their testing permit by the California Department of Motor Vehicles and not reinstated until the Department of Motor Vehicles has reinstated the testing permit.

17. Starting April 1, 2020, participants in both the drivered and driverless AV pilot programs must submit their quarterly data reports on the following dates: January 1, April 1, July 1, and October 1. These reporting period for each of these submissions will be September 1 to November 30, December 1 to February 28 (February 29 in leap years), March 1 to May 31, and June 1 to August 31, respectively.

18. Participants in the Commission's AV Pilot Programs must now report the following information as part of their quarterly pilot data reports:

Appendix 3: Proposed Amendments: Order

- a. Total number of Wheelchair Accessible Vehicle (WAV) rides requested.
- b. Total number of WAV rides requested but unfulfilled because no WAV was available.
- c. Total number of WAV rides requested but unfulfilled because the vehicle operator declined the request.
- d. Total number of WAV rides accepted and fulfilled.

19. Participants in the Commission's AV Pilot Programs are no longer required to report following information as part of their Quarterly Pilot Data Reports:

- a. Total number of accessible rides requested per quarter that are fulfilled.
- b. Total number of accessible rides requested per quarter that are unfulfilled because of a lack of accessible vehicles.
- c. Total number of accessible rides requested per quarter that are declined by the driver.

20. Except for the changes above, the contents of the quarterly data reports required for the AV pilot programs remain the same.

21. An entity seeking to participate in the driverless deployment program shall submit to the Director of Consumer Protection and Enforcement Division (CPED) an application for a permit in the form of a Tier 3 Advice Letter. The application process should be modeled on the General Rules of General Order (GO) 96-B. GO 96-B provides a procedural vehicle by which an entity seeks a Commission order that the requested relief is consistent with Commission policy and applicable law. The permit application will demonstrate compliance with G.O. 157-E; be in conformance with all service requirements in GO 96-B using all of the Transportation Network Company rulemakings service lists; include all the information required by this Decision, particularly the Passenger Safety Plan, the Disability Access plan, the Air Quality and Climate Protection Plan, and the Equity

Appendix 3: Proposed Amendments: Order

Plan as specified in Ordering Paragraphs 8, 11-13; the DMV deployment permit; and an expanded data reporting plan. CPED staff will review each application and prepare a draft resolution recommending appropriate disposition of each application for a Commission resolution. All appeals of resolutions shall take the form of an application for rehearing pursuant to GO 96-B. Entities seeking to appeal the resolution of an advice letter to participate in the driverless deployment program shall follow the requirements under section 8 of GO 96-B— Application for Rehearing and Petition for Modification of Resolution; Request for extension. Such appeals will be reviewed by the Commission’s Legal Division.

22. Entities may apply to offer driverless service with or without shared rides. If an entity applies to offer driverless service without shared rides, its Passenger Safety Plan need not describe how it will minimize safety risks to passengers traveling in shared, driverless rides.

23. If an entity authorized to participate in the driverless deployment program subsequently wishes to provide shared rides using driverless autonomous vehicles, the request shall be made in the form of a Tier 3 Advice Letter that revises the carrier’s Passenger Safety Plan to include the required content related to shared rides. Consumer Protection and Enforcement Division staff will review each Advice Letter and prepare a draft resolution recommending appropriate disposition on the revised Passenger Safety Plan to provide shared rides for a Commission decision. Relatedly, if an entity authorized to participate in the driverless deployment program intends to changes its operations in a way that would materially affect the approaches outlined in its Passenger Safety Plan, that entity should provide the Commission’s Director of Consumer Protection and Enforcement Division with an updated Passenger Safety Plan by way of a Tier 2 Advice Letter.

Appendix 3: Proposed Amendments: Order

24. This proceeding remains open.

This order is effective today.

Dated _____, at San Francisco, California.

Appendix 4: Technical Errors in Proposed Decision

1. ERROR: PD pp. 91-92, 97-99, 109-111, 116-118: As the PD is currently written, the Commission will not be able to effectively analyze GHG and VMT impacts of AV Passenger Services because the data collection methods do not account for the overlapping nature of shared rides.

SOLUTION: Add “vehicle segment report” to data reporting requirements as described below.

Figure 1 and Table 1 below illustrate how, in an environment in which shared rides are permitted, critical information needed by the Commission and others to assess progress towards the Commission’s environmental goals of reducing greenhouse gas emissions, criteria air pollutants, and toxic air contaminants, particularly in disadvantaged communities, is not sufficiently captured in the Commission’s proposed data reporting.

Figure 1 shows Periods 1, 2 and 3 for two hypothetical shared AV trips served by an AV vehicle. At Mile 0, the AV becomes available. At Mile 1, the vehicle accepts its first ride request and at Mile 2 it accepts its second ride request. At Mile 3, the vehicle picks up a party of two, and at Mile 4, the vehicle picks up a party of one. The party of one rides for four miles and alights at Mile 8, while the party of two rides for six miles, and alights at Mile 9. From this illustration one can clearly see that the total vehicle miles traveled (VMT) is 9 miles, and the total passenger miles (PMT) is 16 miles. This results in the efficiency metric (PMT / VMT) of 1.78.

Figure 1

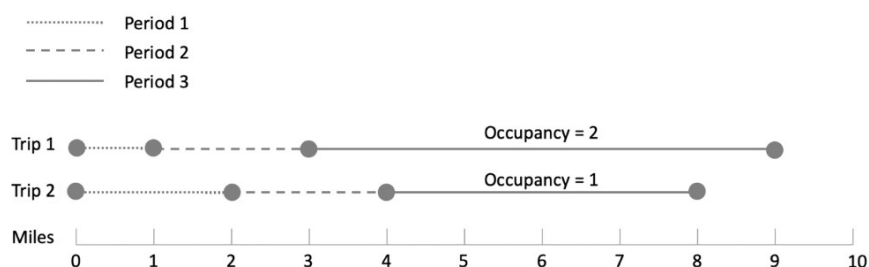


Table 1 illustrates how these hypothetical shared trips would be recorded in the Commission’s proposed reporting. The PMT can easily be calculated and is

Appendix 4: Technical Errors in Proposed Decision

reported in this table. However, the total VMT of the vehicle cannot be calculated, due to the overlapping nature of shared trips. The first challenge is one of classification. Specifically, it is not clear how to record the Period 1 and Period 2 VMT for Trip 2 using the Commission’s proposed reporting. Is there zero Period 1 and Period VMT for Trip 2 because this VMT is captured already in the Trip 1 record?

Table 1: Illustration of PD Trip Data Reporting

VIN	TYPE	WAV	OCCUPANCY	P2_STARTTIME	P3_STARTTIME	P3_ENDTIME	P1_VMT	P2_VMT	P3_VMT	PMT	TRACT_PU	TRACT_DO	ZIP_PU	ZIP_DO	SHARE_REQ	SHARE_FUL	FARED
12AB34CD	BEV	N	2	1604361655	1604362735	1604365975	1	2	6	12	1003	1006	10001	10002	Y	Y	Y
12AB34CD	BEV	N	1	1604362195	1604363275	1604365435	???	???	4	4	1004	1005	10001	10002	Y	Y	Y

The second challenge is one of double-counting. Even if the Period 1 and Period 2 VMT for Trip 2 is recorded as 0, the total VMT across both records would be 13 miles (this is the sum of all the VMT fields across both records), when in fact the vehicle only drives 9 miles. Again, the PMT is easily calculated and reported in the table as a total of 16 miles, but the higher VMT reported resulting from double-counting VMT across both records results in a lower efficiency metric (PMT / VMT) of 1.23 than the true value of 1.78 which can easily be seen in Figure 1. In other words, based on the current data reporting tools the provider of these shared trips would not receive credit for the efficiency of the vehicle miles traveled delivering service to 3 passengers in overlapping shared rides.

Figure 2 illustrates the same two hypothetical trips shown in Figure 1, but includes an additional representation of the vehicle segments. The two trips are now complemented by a representation of six vehicle segments, which capture more precisely where the Period “status” and occupancy of the two trips change.

Figure 2

Appendix 4: Technical Errors in Proposed Decision

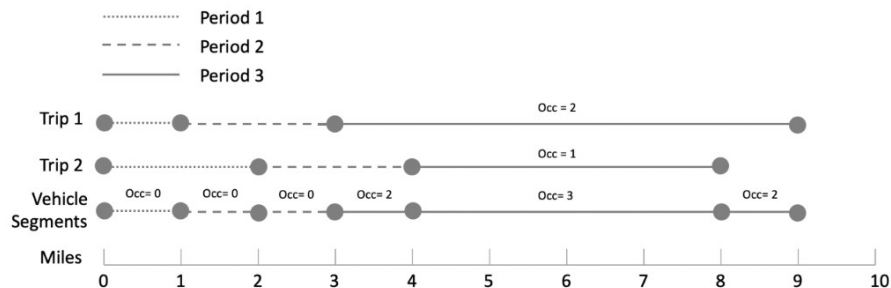


Table 2 illustrates how the vehicle segment data would be recorded in the vehicle segment report. Each record corresponds to a change in the period or passenger trips of the vehicle. The vehicle starts in Period 1 as shown in the first record. When the first ride is accepted, the status changes to Period 2. The third record represents when the second trip is accepted, though the status remains at Period 2. The pick-up of the first party and the changes to Period 3 and occupancy is shown in the fourth record, and the pick-up of the second party and the associated changes in occupancy is shown in the fifth record, though the status remains Period 3. Finally, the sixth record shows the occupancy when the second party has alighted, though again the status remains Period 3. A simple sum of the VMT and PMT columns produces the correct, unbiased reporting of 16 PMT and 9 VMT, resulting in the correct calculation of the efficiency metric (PMT / VMT) of 1.78.

Table 2: City and County Proposed Additional Vehicle Segment Report

VIN	PERIOD	STARTTIME	ENDTIME	STARTTRACT	ENDTRACT	OCCUPANCY	VMT	PMT
12AB34CD	1	1604361115	1604361655	1000	1001	0	1	0
12AB34CD	2	1604361655	1604362195	1001	1002	0	1	0
12AB34CD	2	1604362195	1604362735	1002	1003	0	1	0
12AB34CD	3	1604362735	1604363275	1003	1004	2	1	2
12AB34CD	3	1604363275	1604365435	1004	1005	3	4	12
12AB34CD	3	1604365435	1604365975	1005	1006	2	1	2

Note that this vehicle segment report, which will allow the Commission and others to accurately calculate unbiased performance metrics, does not necessitate changes to the Commission’s proposed trip-level reporting.

Appendix 4: Technical Errors in Proposed Decision

2. ERROR: PD p. 43 states "There is general agreement that AVs hold the potential to reduce the environmental footprint of passenger transportation and reduce street congestion among other benefits. Yet multiple parties note that AVs could harm the environment and worsen congestion by adding cars to the road and increasing the amount of single-occupancy long distance trips.¹¹⁹"

SOLUTION: Strike the first sentence in this paragraph.

This summary of the record in relation to environmental and climate impacts is completely erroneous. The first sentence, describing "general agreement" cites no sources at all, and nothing in the record suggests the existence of a general agreement that AVs 'hold the potential to reduce the environmental footprint of passenger transportation and reduce street congestion. . . ." The second sentence suggests that concern about the impact of AVs on the environment is a minority view held only by the California Transit Association and the Sierra Club. This is mistaken in terms of both the comments filed in this proceeding and in terms of research projections and findings, many of which are cited in party comments.

As to party comments, *eight* non-industry parties all express concern about the risk that AVs will increase congestion and GHG emissions that could harm the environment and call on the Commission to adopt regulations designed to mitigate these risks. See Comments of Sierra Club (Questions 2-8, at.5), CTA (Questions 2-8, at 4), SFO (Questions 2-8, at 8), MTC (Questions 2-8, at 5-8), LADOT (Questions 2-8 at 9-10), UC Davis (Questions 2-8 at 6), AAA Reply Comments on Questions 1-8, at 4; and SFMTA and SFCTA (Question 1 at 10, Questions 2-8, at 11).

As to broader consideration of the potential VMT, climate and congestion effects of AV Passenger Services, the California Air Resources Board *2018 Progress Report on the California Sustainable Communities and Climate Protection Act*, cited in SFMTA Opening Comments on Question 1 at page 10, identifies numerous research studies addressing AV environmental risks and concludes that the 'general agreement' is precisely the

Appendix 4: Technical Errors in Proposed Decision

opposite: “. . . . academic research using various approaches are converging on the finding that, deployed without the appropriate policy framework ahead of their arrival, AVs are likely to significantly increase driving – particularly if they are personally owned.” CARB Progress Report, p. 83. Many subsequent studies have confirmed this projection and urged adoption of safeguards that allow California to appreciate the potential benefits of AV Passenger Services while mitigating their environmental and other risks.

3. ERROR: PD, 13 notes that “LADOT and SFMTA and SFCTA argue that the Commission should not authorize fare collection because testing periods should focus on safety and other policy goals, not generating revenue for the service providers.”

SOLUTION: Strike this sentence from this finding, as the PD is quoting SFMTA and SFCTA’s representation of its historic position; not its position taken in 2020 Comments.

4. ERROR: PD, p. 21, The PD states, “The CTA and SFMTA and SFCTA further assert that sandbox testing would allow cities to ensure AVs support state and local transportation goals.” This is incorrect. The SFMTA and SFCTA state that sandbox testing would provide for collaborations that could demonstrate or validate a developer’s methods for meeting *Commission* goals and calls for the collaborators to file a joint report *with the Commission*.

SOLUTION: Correct the text to read: “The . . . SFMTA AND SFCTA further assert that sandbox testing would allow cities to ensure AVs support Commission goals.”

5. ERROR: PD p. 89, 96, 108, 116: In both the Conclusions of Law and Order, the PD requires permit-holders participating in the deployment program for Drivered and Driverless Autonomous Vehicle Passenger Service to “Transmit simultaneously to the Commission all reports required by Department of Motor Vehicles regulations, including the process in the event of a collision, law enforcement interaction plan, collision reporting, disclosure to the passenger regarding collection and use of personal information, and annual Autonomous Vehicle disengagement reports.”

Appendix 4: Technical Errors in Proposed Decision

These forms of reliance on DMV regulations appear to reflect a misunderstanding of existing DMV regulations. Disengagement reporting is required by Article 3.7 of the DMV regulations, which governs *testing* of autonomous vehicles. Disengagement reporting is not required by Article 3.8 of DMV regulations, which govern *deployment* of autonomous vehicles. Similarly, Article 3.7 requires permittees holding *test permits* to report on a form OL 316 all collisions that arise from operation of an AV on public roads that result in damage to property or personal injury. Article 3.8 includes no such requirement for AV deployment permittees. As written, the PD will not give

In other words, after authorization of ‘deployment’ of automated vehicles, the State of California has no mechanism in place to evaluate the frequency of failures in automated driving technology or how those failures may reflect near misses in interactions with vulnerable road users such as cyclists and pedestrians, affect the flow of traffic in different circumstances and/or driving environments or affect the safety of passengers and others affected by Automated Vehicle Passenger Services. Furthermore, the State of California has no mechanism in place to evaluate the frequency and severity of collisions involving automated driving and the relative driving safety performance as between human drivers and automated drivers.