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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.

Rulemaking 12-12-011

**DECISION ADOPTING NEW DATA REPORTING
REQUIREMENTS FOR AUTONOMOUS VEHICLES
DEPLOYMENT AND PILOT PROGRAMS**

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**DECISION ADOPTING NEW DATA REPORTING
REQUIREMENTS FOR AUTONOMOUS VEHICLES
DEPLOYMENT AND PILOT PROGRAMS**

Summary

This decision adopts, with modifications, the May 25, 2023 Autonomous Vehicle Data Reporting Staff Proposal which expands and adjusts the existing data reporting requirements in the Commission's Autonomous Vehicle (AV) Passenger Service programs. Consistent with the Commission's regulatory mandate to promote the safety of AV passenger services, the decision is part of the Commission's ongoing efforts to monitor and evaluate evolving AV passenger service operations, as well as refine its AV policies. The changes adopted herein address (1) the level of detail required for incident reporting; (2) the level of detail required for stoppage event reporting; (3) the reporting protocols for the AV Pilot Program reporting; and (4) the collision reporting protocols.

This decision also clarifies the role of Commission staff in ensuring compliance with the Commission's data reporting requirements for AV passenger service operations.

This proceeding remains open.

1. Background

1.1. Factual Background

Decision (D.) 18-05-043 (*Pilot Decision*) created the AV Passenger Service Pilot program (AV Pilot) to allow for non-fared testing of AVs in passenger service by AV passenger service operators (AV operators). In establishing this program, the Commission acknowledged that California has a longstanding public interest in overseeing the provision of passenger service on public roads. This public interest is an outgrowth of California's ongoing duty to evaluate the

impact of regulated passenger services on passenger safety, driver safety, consumer protection, along with the fitness of the companies providing these services to the public. D.20-11-046 (*Deployment Decision*), as modified by D.21-05-017, expanded the Commission's AV programs in 2020 to provide for farmed AV passenger service through the Phase I AV Passenger Service Deployment programs (AV Deployment). In either program, a carrier may hold permits allowing for (1) drivered service with a safety driver present in the vehicle or (2) driverless service without a safety driver present in the vehicle. To participate in any Commission AV program, a carrier must first hold the relevant AV permit from the California Department of Motor Vehicles (DMV). By statute, the DMV is the agency responsible for issuing the initial AV operational permit,¹ while the Commission's regulation is focused on issuing permits to allow AV operators to pick up and transport passengers. Accordingly, participants in the Commission's AV programs must comply with the provisions of General Order (GO) 157--E,² which includes regulations related to insurance, drug and alcohol testing, inspections, and other requirements for Transportation Charter-Party carriers.

Participants in the Commission's AV programs are currently required to submit data on a quarterly basis.³ Data reporting requirements differ for the AV Pilot and AV Deployment programs, with the Deployment program requiring

¹ D.20-11-046 (as modified by D.21-05-017) at 30. *See also* California Vehicle Code § 38750, 13 CCR § 227.38, and 13 CCR § 228.06.

² General Order 157-E is available at: <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M322/K150/322150628.pdf>.

³ More information on data reporting requirements for the Commission's AV programs is available at: <https://www.cpuc.ca.gov/regulatory-services/licensing/transportation-licensing-and-analysis-branch/autonomous-vehicle-programs/quarterly-reporting>.

more detailed reporting. Participants in the AV Pilot program report aggregated (*i.e.*, not trip-level) metrics around vehicle miles traveled, waiting time, vehicle occupancy, and wheelchair accessible rides. Participants in the AV Deployment program report more detailed trip-level data, including zip code and census tract level locations, and counts of incidents and complaints. Incident reporting includes counts of collisions, citations, and pickup and drop-off activity occurring more than 18 inches from the curb. Neither program currently require participants to submit detailed information about non-collision incidents, such as stoppage events, *i.e.*, situations where AVs have stopped and are not moving when they should be.

The AV industry has evolved significantly since the initiation of the Commission's AV programs in 2018 and expansion in 2020. When the AV programs were created, driverless operations of AVs on public roads in California were very limited. While the first driverless passenger service permits were issued in 2021,⁴ quarterly data reports indicate driverless passenger service operations did not become widespread until late 2022.⁵ Prior to the 3-month reporting period beginning December 2022, driverless passenger service mileage averaged less than 10,000 miles per reporting period. Over 138,000 miles were reported in the next reporting period, increasing to over 672,000 miles reported for the June-August 2023 reporting period and over one million miles for September-November 2023. This upward trend has continued through 2024, with over two million driverless miles reported in the latest 3-month reporting period

⁴ The first driverless pilot permit was issued to Cruise in June 2021. The first driverless deployment permit was issued to Cruise in June 2022.

⁵ Quarterly AV data reports are available on the Commission's website at: <https://www.cpuc.ca.gov/regulatory-services/licensing/transportation-licensing-and-analysis-branch/autonomous-vehicle-programs/quarterly-reporting>.

ending May of 2024. New challenges such as those described in the *Ruling on Development of New Data Reporting Requirements for Autonomous Vehicles Driverless Deployment Program (Ruling)*⁶ have accompanied this expansion in driverless operations, underscoring a need for a “proactive and flexible regulatory approach”⁷ to continuously evaluate and develop AV policy at the Commission.

1.2. Procedural Background

On May 25, 2023, the then Assigned Commissioner (Genevieve Shiroma) issued her *Ruling on Development of New Data Reporting Requirements for Autonomous Vehicles Driverless Deployment Program (Ruling)*. The *Ruling* acknowledged concerns regarding incidents where AVs have blocked traffic, interfered with public transit including light rail vehicles, or impeded the activities of first responders. Given these incidents and the need for deeper insights into AV passenger service performance, the *Ruling* aimed to develop policies to monitor and evaluate AV operations and the appropriateness of current policy as AV technology and operations continued to evolve.

The *Ruling* identified the following issues for resolution:

- What data, if any, that is not currently being collected by CPED is needed to monitor and evaluate the impacts of AV operations?
- What data, if any, is technically and operationally feasible to collect and report?
- What cadence is appropriate for data reporting?
- Is it reasonable to require AV data collection and reporting to begin immediately upon publishing of the new data reporting requirements?

⁶ Upon her retirement, this proceeding has been reassigned to Commissioner Matthew Baker.

⁷ *Ruling on Development of New Data Reporting Requirements for Autonomous Vehicles Driverless Deployment Program* at 1.

- Should AV collected data be shared with stakeholders?

The *Ruling* included a proposal from the Commission's Consumer Protection and Enforcement Division (CPED) staff that addressed the above issues in order to expand AV data reporting across all Commission AV passenger service programs. Specifically, CPED proposed:

- Expanding AV Pilot reporting to match the more detailed requirements of the AV Deployment program.
- Instituting detailed collision reporting in AV Deployment, modeled on DMV form OL-316.
- Instituting monthly reporting for all AV operators that includes operational data such as count of trips and vehicle-miles traveled (VMT), reporting on "minimal risk condition"⁸ events, and reporting on passenger pickups and drop-offs occurring more than 18 inches from the curb.

The parties were invited to provide comments on the Staff Proposal and to state any interest in the sharing of relevant municipal data with CPED. On June 15, 2023, the following parties filed Comments: Waymo, Cruise, Zoox, Autonomous Vehicle Industry Association (AVIA), Silicon Valley Leadership Group (SVLG), San Francisco Taxi Workers Alliance (SFTWA) and, filing jointly, the San Francisco Municipal Transportation Agency and San Francisco County Transportation Authority (collectively, San Francisco).

On June 22, 2023, CPED hosted a public workshop that included parties and other stakeholders such as DMV and academic panelists. On June 27, 2023, the following parties filed post-workshop comments: Waymo, Cruise, Zoox,

⁸ See 13 CCR § 227.02. "Minimal risk condition" is a low-risk operating condition that an autonomous vehicle automatically resorts to when either the automated driving systems fails or when the human driver fails to respond appropriately to a request to take over the dynamic driving task.

AVIA, SFTWA, and San Francisco. As we discuss in more detail herein, the parties raised questions relating to data and metrics, reporting timing, and data confidentiality.

Based on the Comments, the Commission will adopt the Staff Proposal but with updates that address issues covering trip-level incident reporting; AV Pilot reporting; collision reporting; stoppage events; reporting timing; confidentiality; and staff authority to collect AV data.

2. Issues Before the Commission

See Section 1.2 of this decision, *supra*.

3. Discussion and Analysis

3.1. Disaggregated Incident Reporting

3.1.1. Discussion

Currently, incidents (*e.g.*, citations, collisions, and complaints) are reported at an aggregated level and separately from trips. First, *trip-level* reporting includes information related to passenger trip time, location, vehicle miles traveled, and vehicle information such as VIN (vehicle identification number), fuel type, and wheelchair accessibility. Each passenger service trip, including unfulfilled trips, is represented as an individual row in each trip report.

Second, and in contrast, *incident* reporting is currently structured as aggregated counts of various types of incidents and complaints. These counts are aggregated for the entire reporting quarter and, as such, do not reflect the details of any individual incident. The current required categories of reported incidents include collisions, citations, assaults, harassment, and payouts. A limited amount of location data is provided in the form of aggregated reporting of collisions and certain pickup and drop off information for each census tract in a carrier's Operational Design Domain (ODD). The Commission prescribed the general form of this report and delegated to CPED staff the authority to "in collaboration

with stakeholders, ... develop a standard to identify and categorize these complaints and incidents.”⁹ Accordingly, CPED developed a data reporting template and posted it to the Commission’s website in 2022.

3.1.2. Requirements

The Commission finds it will be more efficient and provide greater insights into AV passenger transport operations to require AV operators to provide data on individual incidents, rather than an aggregated count of incidents. Doing so will allow for more detailed monitoring and analysis of trends that may implicate passenger and public safety, while facilitating easier follow-up as needed on specific incidents. As we have noted above, incident reporting is currently aggregated and does not allow for the analysis of trends beyond broad numerical counts. For example, trends relating to locations or times of day cannot be easily ascertained through the existing aggregated reporting. Monitoring and analysis of incidents’ locations and other contextual details, particularly non-collision incidents such as citations or complaints, may provide leading indicators of potential passenger safety or customer service challenges before a more serious incident occurs. While CPED staff have the authority to request additional data from carriers, including data providing more details on aggregated incidents reported, requesting data on an *ad hoc* basis is not as efficient and does not provide the same level of transparency to the public as the required quarterly reports.

Accordingly, the Commission will require reporting on each individual incident, including time and location, in the incident categories currently required, and will no longer require aggregated reporting on incidents. Staff will

⁹ D.20-11-046.

modify the reporting template accordingly to include, at minimum, the following information that relates to each incident:

- Date and time of incident;
- AV Vehicle Identification Number;
- Location of incident including Latitude and Longitude, Zip Code and Census Tract number;
- Whether there was a citation and if so:
 - Type of violation, including reference to the code violated, as applicable;
- Whether the citation was associated with pickup or drop off (within the period beginning five seconds prior to AV arriving at the pickup/drop off location through five seconds after the AV departs the pickup/drop off location);
 - The entity issuing the citation;
- Whether there was a collision and if so:
 - Type of collision;
 - Parties involved in the collision; and
 - The identification of any reports made to the National Highway Traffic Safety Administration (NHTSA) pursuant to its Standing General Order 2021-01 on Incident Reporting for Automated Driving Systems and Level 2 Advanced Driver Assistance Systems (SGO);
- Whether there was a complaint and if so:
 - The type of complaint (*e.g.* safety, pickup and drop off, lane blocking, accessibility, wheelchair accessibility, or customer service);
- Whether there was a claim of harassment and if so the type of harassment;
- Whether there was a claim of assault and if so the type of assault; and

- Whether there were payouts to parties involved in the incident and the total amount (if known).

3.2. AV Pilot Program Reporting

3.2.1. Discussion

In the May 25, 2023 Staff Proposal, CPED proposed that participants in the AV Pilot programs would be required to submit quarterly data reports using the same templates as AV Deployment participants. Currently, AV Pilot participants submit a very limited set of data on aggregated VMT, vehicle occupancy, waiting time, and wheelchair accessible vehicle (WAV) service. In contrast, AV Deployment participants submit a series of reports that include detailed trip-level data, including VMT and location data, and incident and complaint data.

San Francisco and SFTWA supported expanding AV Pilot reporting, arguing that AV Pilot data should be evaluated to inform potential expansions of AV service, including expansions to fared AV Deployment. Cruise, Waymo, Zoox, AVIA, and SVLG (collectively, the AV Parties) opposed expansion of Pilot reporting, arguing such an expansion would be burdensome, especially to pre-commercial Pilot participants. These parties also argued that expansion of Pilot reporting is not aligned with the Commission's stated purpose of the Pilot to assess public interest in AV service.

3.2.2. Requirements

We will require that AV Deployment reporting requirements, including any new reporting requirements established herein, be extended to Pilot participants when their quarterly passenger trip volume exceeds 300 trips. That represents an average of 100 passenger trips per month, which we believe represents a reasonable allowance for small-scale testing for pre-commercial participants. Per the most recent quarterly reports representing operations from

March through May 2024, two of the Commission's four active Pilot Program participants exceeded this threshold.

We will also modify the reporting requirements for AV Pilot participants who provided no reportable service in a particular quarter. Currently all carriers must submit reports, even if those reports include only zeroes. Instead, carriers who provided no reportable service shall be required only to submit an attestation to that effect, rather than submit a full set of reports.

In adopting these requirements, we acknowledge party arguments around the potential burdens of expanded reporting on smaller, developing companies. But the potential passenger and public safety impacts of AV operations are not limited only to AVs collecting fares for passenger service. AV Pilot data is informative to both the Commission and the public in understanding and evaluating AV operations as they develop. Therefore, in order to strike what we believe is the proper balance between the burden on the AV operators and the Commission's continuing need for AV Pilot program information, we will include an allowance for reduced reporting for small scale testing operations to reduce burdens on early-stage AV operators. But as AV Pilot service for these early-stage AV operators scales upwards, they shall be required to report a fuller set of data to support monitoring and evaluation of Pilot operations and provide foundational data for future AV Deployment, if applicable.

While the original purpose of the AV Pilot as established in the *Pilot Decision* was to assess public interest in AV service,¹⁰ the Commission must evolve its regulation and evaluation of AV service as technology advances, operations expand, and as we learn more about this growing industry. As such,

¹⁰ D.18-05-043 at 40.

the *Ruling* called for a “proactive and flexible regulatory approach that must continually evaluate and develop regulatory policy” to support the Commission’s AV goals. We also believe that Pilot Program service and the data generated from it may provide a helpful context for carriers’ future AV Deployment applications, to the extent they wish to advance to fared passenger service.

To summarize, the level of detail that we require for the AV Pilot Program reporting includes the following:

- Participants in the Commission’s AV Passenger Service Pilot (AV Pilot) programs reporting over 300 passenger service trips in a quarter shall submit the expanded data reports currently required of participants in the Phase I AV Passenger Service Deployment (AV Deployment) programs;
- AV Pilot participants reporting less than 300 passenger service trips in a quarter shall continue to submit the AV Pilot data reports described in the Pilot and Deployment Decisions;
- AV Pilot participants reporting no trips in a quarter shall submit an attestation to that effect, rather than a full set of reports;
- AV Deployment and AV Pilot participants exceeding 300 quarterly passenger service trips shall report incident-level and fleet-level data on stoppage events *i.e.*, situations where AVs have stopped and are not moving when they should be;
- All AV data shall be reported quarterly;
- Reporting quarters and deadlines shall be shifted to align with regular calendar year quarters: January 1 through March 31, reports due May 1; April 1 through June 30, reports due August 1; July 1 through September 30, reports due November 1; October 1 through December 31, reports due February 1; and

- Collection of any new data requirements adopted by the Commission will begin according to the schedule in Section 3.5.2.

3.3. Collision Reporting

3.3.1. Discussion

The Staff Proposal called for expanded collision reporting requirements for the AV Deployment program modeled on DMV form OL-316. Current reporting requirements include only limited data on collisions occurring in Deployment operations.

Participants in the Commission's AV programs are required to submit simultaneously to the Commission any reports submitted to the DMV.¹¹ These include collision reports, such as DMV's form OL-316 or SR-1. DMV form OL-316 is an AV-specific collision reporting form that includes detailed location, road condition, and narrative information.¹² The DMV requires the submission of an OL-316 by manufacturers participating in the DMV's AV testing program for any collision that resulted in property damage, bodily injury, or death. DMV form SR-1 is a general collision form applicable to all vehicles (AVs or otherwise) that must be submitted if a collision resulted in an injury, death, or property damage in excess of \$1,000.¹³ Form SR-1 contains general information about the collision location, parties involved, and collision damages, but lacks detailed location, conditions, and narrative information. Form SR-1 is submitted when required by

¹¹ *Pilot Decision* Ordering Paragraphs (OPs) 5 and 8, and *Deployment Decision* OPs 5(h) and 7(g).

¹² AV collisions reported via DMV Form OL-316 are available on the DMV's website at: <https://www.dmv.ca.gov/portal/vehicle-industry-services/autonomous-vehicles/autonomous-vehicle-collision-reports/>.

¹³ See <https://www.dmv.ca.gov/portal/dmv-virtual-office/accident-reporting/>.

all AV operators in testing or deployment. Both forms require submittal to the DMV (and to CPUC simultaneously) within 10 days of the collision.

Parties were generally not opposed to expanded collision reporting, but they differed in their implementation preferences. San Francisco supported enhanced collision reporting and requested the Commission collect additional information such as VIN, RideID, DMV and CPUC permit numbers, Automated Driving System (ADS) status and version, safety driver presence, and pre-collision speed. San Francisco also argued that identifying information about the ADS should not be redacted.

Cruise proposed that enhanced collision reporting in Deployment should be done through simultaneous submission of collision reports required by the NHTSA (SGO).¹⁴ Waymo, although initially supportive of modeling reporting on form OL-316, supported Cruise's proposal. The SGO requires reporting of collisions where the ADS was in use any time within 30 seconds of the collision, and the collision resulted in property damage or injury. San Francisco noted that the SGO is currently planned to sunset in May 2026.

3.3.2. Requirements

We agree that simultaneous submission of full, unredacted NHTSA SGO reports is appropriate for reporting of collisions in AV Deployment. When transmitting these reports to the Commission, carriers should note the specific authority (configuration) the AV was operating under when the collision occurred – *e.g.*, Drivered or Driverless Pilot, Drivered or Driverless Deployment.

¹⁴ Second Amended Standing General Order 2021-01 on Incident Reporting for Automated Driving Systems (ADS) and Level 2 Advanced Driver Assistance Systems (ADAS), National Highway Traffic Safety Administration. Available at: <https://www.nhtsa.gov/document/sgo-crash-reporting-adas-ads>.

The SGO reports contain similar, and in some areas more detailed, information to DMV form OL-316. Unlike OL-316, SGO reports are required for *all* AV collisions, whether in testing or deployment. The SGO requires reporting of a collision as soon as one calendar day after the incident, with provisions for extended reporting (five days or by the 15th of the following month) for less severe incidents. It also provides for updates to previously submitted incident reports, and submission of monthly reports confirming lack of reportable information if applicable.

In comments and in discussion at the AV Data Workshop, stakeholders repeatedly emphasized a desire to reduce duplicative data reporting across various government agencies. We agree that reducing duplication is desirable, as long as each agency, including the Commission, has the information it needs to regulate effectively.

As noted by San Francisco, the SGO will sunset in May 2026 unless otherwise amended or extended by NHTSA. As ordered in the *Deployment Decision*, the Commission will initiate Phase II of the AV Deployment program no later than February 2025 (3 years after the issuance of the first AV Deployment permits; Drivered Deployment permits were issued to Cruise and Waymo in February 2022). The Commission may revisit collision reporting as needed in this proceeding or through its staff. If the SGO sunsets prior to the establishment of additional reporting requirements, the Commission grants authority to staff to issue guidance continuing or modifying collision submission guidelines.

We summarize the new requirement as follows:

AV Deployment participants shall simultaneously submit to the Commission unredacted collision reports currently submitted to the National Highway Traffic Safety Administration per its Standing

General Order on Incident Reporting for Automated Driving Systems and Level 2 Advanced Driver Assistance Systems if the collision occurs while in passenger service (*i.e.*, Periods 1 [Service available, waiting for a passenger match], 2 [Match accepted and the vehicle is in route to pick up passenger], or 3 [Passenger is in vehicle until the passenger exits the vehicle]). When transmitting these reports to the Commission, carriers shall note the specific authority the AV was operating under when the collision occurred.

3.4. Stoppage Event Reporting

3.4.1. Discussion

In her *Ruling*, Commissioner Shiroma expressed concerns about “incidents where AVs have blocked traffic, interfered with public transit including light rail vehicles, or impeded the activities of first responders,” noting the need for new policies like expanded data reporting to monitor and track evolving AV operations. The Staff Proposal accordingly proposed reporting of every instance where an AV achieved a minimal risk condition (MRC). For each of these instances, CPED proposed that the carrier report identifying information about the vehicle involved, the date, time, and location of the instance, a narrative description of the instance, and information relating to the involvement of law enforcement, the resolution of the stop, the carrier’s response time, and impacts on any passengers in the vehicle.

Per 13 CCR § 227.02, a “minimal risk condition” is a low-risk operating condition that an autonomous vehicle automatically defaults to when either the automated driving systems fails or when the human driver fails to respond appropriately to a request to take over the dynamic driving task. An MRC event typically involves the AV coming to a stop, ideally safely pulled over out of traffic, but sometimes in an active travel lane. The AV may achieve MRC for a wide variety of reasons, and instances of a vehicle achieving MRC may be resolved in a variety of ways – including various levels of manual interaction

(remotely or in-person) and/or the vehicle transitioning back into normal autonomous operations.

Cruise, Waymo, and Zoox argued that the Commission should instead collect a narrower set of data on incidents where stopped AVs required manual retrieval from the field, noting that MRC is a required feature per DMV regulations and that not all MRC events are indicative of a safety or operational problem. AVIA argued that MRC data is not relevant to AV safety. In contrast, San Francisco, citing the discussion at the June 22 workshop, indicated that reporting of every instance of where the AV calls for remote assistance could be helpful even if not all such calls indicate a problem. San Francisco further advocated for a single clear definition for reportable events and noted a need for further discussion on other types of reportable events that are not unplanned stops. SFTWA supported full reporting of MRC events and non-MRC events such as erratic driving.

3.4.2. Requirements

We agree that further refinement is needed to clearly define reportable events so that the Commission can gather data on incidents relevant to passenger safety. As highlighted in the *Ruling*, AVs occasionally stop or become “stuck” and are not moving when they should be. For purposes of this decision, an AV is not considered stopped when performing routine functions of the dynamic driving task like stopping at a stoplight, yielding to another road user, or during passenger pickup and drop-off. While other terms have been used in the record to describe instances where AVs are stuck, there is currently no industry-standard term for these types of non-collision events. Therefore, in order to establish new reporting requirements, we will define the term “stoppage event” as an instance where the following three criteria are met: 1) an AV operating

under a CPUC permit has stopped, 2) it cannot proceed without outside assistance, and 3) where the stop lasts a specified duration. The stoppage event begins the moment the vehicle stops, regardless of whether the initial stop was routine, and ends when the vehicle mobilizes, regardless of whether it mobilizes in autonomous mode or is manually retrieved. This decision establishes the reportable duration of a stoppage event for fleet level reporting to be thirty (30) or more seconds and for incident level reporting to be two (2) or more minutes. Outside assistance can include, but is not limited to, remote assistance or guidance provided by the AV operator or its contractors and manual, in-person assistance provided by the AV operator or its contractors, first responders, or other individuals.

With this definition, the Commission affirms that stoppage event reporting should yield data on stops that may have a variety of causes, resolutions, and that may result in various outcomes. However, the *Ruling* also noted that stoppage events can present hazards to passenger safety. Some stoppage events may require carrier staff to manually remove the AV, increasing the duration and disruptiveness of the stoppage event.

The Commission believes that collecting information on the broadest types of stoppage events, including the broadest understanding of “outside assistance,” targeted to those incidents with the highest risk to passenger safety, is prudent. Collecting inclusive data on this topic will allow us to monitor the causes, resolutions, and consequences of stoppage events in order to further refine data reporting needs and inform future rules and regulations. As AV operations and the regulatory landscape evolve, the Commission through its staff may continue to develop and refine its terminology.

Thus, we will require the reporting of AV stoppage events in order to support staff efforts to: (1) Track and analyze incidents of concern, allowing the Commission to follow up on specific incidents as needed and to determine their impact on passenger safety; and (2) understand the impacts of stoppage events on passenger safety more generally, both as a snapshot of current safety performance and assessment of safety trends over time. This reporting will support the Commission in monitoring and responding to immediate challenges in AV passenger service operations while informing longer-term developments in AV policy, including the planned Phase II of AV Deployment ordered by the *Deployment Decision*.

We acknowledge that many significant consequences of stoppage events are within the regulatory purview of our sister agency, the California DMV, and/or the regulatory responsibilities of federal agencies (NHTSA, NTSB) or local law enforcement. We intend to use this data for our regulatory function: regulating passenger safety in this segment. Yet we acknowledge that the data may also be useful for other regulatory bodies, some of whom communicate routinely with our staff on AV matters, who are responsible for vehicle safety, roadway safety, and traffic planning and roadway management.

Accordingly, we will require the collection of two categories of stoppage event data: incident level and fleet level. These requirements shall apply to all participants in the AV Deployment program and participants in the AV Pilot program that have passed the 300-passenger trip threshold described in Section 3.1 above.

Incident-level reporting is intended to provide detailed information about specific stoppage events of concern. We require that all stoppage events occurring in passenger service and lasting two minutes or more as defined above

shall be reported with additional incident-level data (as outlined below) to provide context on each stoppage event beyond its duration. A two-minute threshold will allow Commission staff to capture events more likely to be disruptive or hazardous, while minimizing the burdens of reporting and analyzing a large set of minor events that are less likely to implicate immediate safety concerns.

Fleet-level reporting is intended to provide a monthly aggregation of fleetwide stoppage event metrics across a larger underlying data set, allowing Commission staff to monitor trends more broadly without requiring detailed compilation and analysis of events that may not be impactful. For these aggregated metrics, we will focus on stoppage events (as defined above) lasting 30 seconds or more. We explain each of these categories and their accompanying metrics below. A proposed updated data template, including an updated data dictionary, will be made available on the Commission's website. The *incident-level reporting* requirements that we adopt for stoppage event incidents are as follows: for all stoppage events lasting two minutes or more from the initial stop to the AV continuing with its journey or being removed from operations, the following information shall be required as part of incident-level report, at minimum:

- Identifying information
 - Carrier Identification (ID);
 - Stoppage Event ID; and
 - AV Vehicle Identification Number;
- Duration of Stoppage Event Incident
 - Date/time of initial stop (the time that AV stops which leads to the Stoppage Event); and

- Date/time of resolution – no longer stopped due to manual removal, resuming normal operations, etc.;
- Location
 - Latitude and longitude of stop;
 - Whether the AV was stopped:
 - More than 18 inches from the curb;
 - Blocking a travel lane;¹⁵
 - Blocking a travel lane designated for the exclusive use of public transit, blocking a transit vehicle stop, or otherwise blocking the path of a public transit vehicle;
 - Blocking a bike lane;¹⁶
 - Blocking ingress to or egress from a fire station, blocking the path of first responders traveling code 3 with lights and sirens or within the perimeter of an emergency response scene;¹⁷
 - Blocking a crosswalk or a curb ramp;¹⁸
 - Blocking an intersection; and
 - Within 7.5 feet of the nearest railroad, street railway, or light rail;¹⁹
- Passenger impacts
 - If a passenger was present in the vehicle, and if so:
 - If the ride was completed to its original destination;

¹⁵ An AV is blocking a travel lane if it is stopped in a location where stopping and parking are not authorized at the time.

¹⁶ An AV is blocking a bike lane if any part of the vehicle is obstructing the bike lane.

¹⁷ An AV is blocking a driveway if any part of it extends into the driveway past either curb cut, where the curb begins to slope downward to street level.

¹⁸ An AV is blocking a crosswalk if any part of the AV is within the marked area of the crosswalk or if any part of the AV is blocking a curb ramp located inside or adjacent to the crosswalk.

¹⁹ See California Vehicle Code Section 22656

- If the vehicle was en route to pick up a passenger;
- Report ID(s) associated with any report(s) made to NHTSA per the SGO in connection with this stoppage event:
 - Highest Injury Severity Alleged, per NHTSA SGO report(s);
- Resolution of stoppage event
 - How the stoppage event was resolved:
 - If manual in-person intervention was required; and
 - If the vehicle was manually removed (by carrier staff or designees, first responders, others), if it resumed normal operations following remote guidance (*e.g.*, continued on its journey), or other categories as applicable;
 - For incidents involving manual in-person intervention, response time milestones:
 - Time of carrier staff (or designee) dispatch; and
 - Time of carrier staff (or designee) arrival.

The *fleet-level* reporting requirements that we adopt for all stoppage events lasting 30 seconds or more from initial stop to resolution and all stoppage events (of any duration) requiring manual in-person assistance shall be included in the fleet-level reports:

- Count of manual removals (AV physically driven away, towed, or otherwise removed from the street);
- Count of relaunches where carrier staff responded in person, but the vehicle was able to resume normal operations (no manual removal);
- Average response time – duration between initial stop and staff arrival at vehicle;
- Average resolution time – duration between initial stop and removal or relaunch;

For all stoppage events of 30 seconds or more:

- Average resolution time – duration from initial stop to removal or resuming normal operations;
- Median resolution time – duration from initial stop to removal or resuming normal operations; and
- Percent of these stoppage events requiring manual removal.

To assist in determining whether a specific stoppage event should be reported, operators can apply a three-part logical test associated with the definition: (1) “Did the vehicle come to a complete stop?”; (2) “Was the vehicle unable to proceed without outside assistance?”; and (3) “Did the stop exceed the maximum stoppage threshold time?” If the answer is yes to all three questions, the situation should be reported.

3.5. Reporting Cadence and Implementation Timing

3.5.1. Discussion

Currently all AV program participants report data on a quarterly basis, using quarters that run from September 1 through November 30, December 1 through February 28 or 29, March 1 through May 31, and June 1 through August 31. Reports are due one month after the end of the quarter – *e.g.*, reports for the quarter ending August 31 are due on October 1. Two elements of timing are at issue here: the cadence of ongoing reporting and the timing of initial implementation of the new data reporting requirements.

CPED proposed that certain data related to AV operations, unplanned stops, and pickup and drop-offs be reported on a monthly basis, with monthly reports due on the 10th of the following month. While CPED did not propose a particular implementation timeline for the new reporting requirements, the

Ruling asked for party feedback on whether data collection and reporting could begin immediately upon publishing of the new requirements.

Reporting Cadence

The AV Parties argued that reporting should be no more frequent than quarterly. Parties indicated that monthly reporting would be overly burdensome; Cruise indicated that monthly reporting would require hiring of additional personnel and redirection of personnel time to data collection rather than improving AV service. More broadly, the AV parties questioned the Commission's purpose in collecting more frequent data, as well as staff's capacity to intake and analyze data on a more frequent basis. In contrast, San Francisco supported monthly reporting of data, including monthly operations data.

Implementation Timing

AV parties generally advocated for a lag in implementation of the new reporting requirements, citing the need to modify internal systems in order to reduce potential errors from manual data compilation. San Francisco argued that new data collection and reporting should commence immediately or within 90 days if immediate implementation is not feasible. San Francisco also argued the Commission should require backdated reporting of all unplanned stops in driverless operations to date.

3.5.2. Requirements

We require that all data be reported on a quarterly basis. Quarterly reporting offers a reasonable balance between the data needs of the Commission and the public for monitoring AV operations and planning for future policy developments and burdens on AV carriers. Commission staff shall have the

authority to seek information from carriers on an *ad hoc* basis as needed and may expedite the use of that authority if data is needed more urgently.

We further require that the quarters be shifted to align with regular calendar year quarters, rather than the offset quarters currently in place. Doing so will allow for a more organized analysis that is easier to compare to other data sets within and beyond the Commission. The new quarterly reporting periods would run from January 1 through March 31, April 1 through June 30, July 1 through September 30, and October 1 through December 31. Reports will continue to be due one month after the quarter's close, i.e., on May 1, August 1, November 1, and February 1.

During the transition to the new requirements, carriers should submit their next quarterly report according to the existing schedule, with currently required data reports covering the period September 1, 2024 through November 30, 2024 due on January 1, 2025. Carriers will submit an additional report covering the period between December 1, 2024 to December 31, 2024 by February 1, 2025.

Carriers should then expect to collect data according to this decision's requirements from January 1, 2025 onward. Accordingly, the first set of reports that include stoppage events and the other new data would be due on May 1, 2025. However, to provide sufficient time to establish internal processes for identifying stops where the AV cannot proceed without outside assistance, reporting for the first reporting period of January 1, 2025 to March 31, 2025 will be simplified for AV operators currently participating in the Deployment program. During this period, AV operators will collect data according to all new requirements set forth in this decision except: 1) AV operators are required to collect and submit incident-level stoppage event data on all stops of 2 minutes or more, regardless of whether outside assistance was required (i.e., AV operators

should only apply parts 1 and 3 of the three-part test established in Section 3.4.2 when determining which stoppage events to report); and 2) AV operators will not be required to submit fleet-level data for stoppage events. Beginning April 1, 2025, AV operators will be expected to submit stoppage event data according to the complete definition of stoppage events in Section 3.4.2 of this decision.

Similarly, to provide sufficient time to establish new reporting processes to current and future participants in the AV Pilot programs, the updated Pilot reporting requirements will go into effect April 1, 2025.

In summary, if the new data requirements are approved on November 7, 2024, the upcoming due dates for existing and/or new data requirements are as follows:

- January 1, 2025: Existing data reports are due from all AV operators for the period from September 1, 2024 through November 30, 2024.
- February 1, 2025: Existing data reports are due from all AV operators for the period from December 1, 2024 through December 31, 2024.
- May 1, 2025: Data reports are due from AV operators participating in the Deployment program. These reports must follow the updated reporting requirements (with the exceptions described in this section 3.5.2) for the period from January 1, 2025 through March 31, 2025. Data reports are also due for this period from AV operators participating in the Pilot program according to the existing data requirements.
- August 1, 2025: Data reports are due from AV operators participating in the Deployment and/or Pilot programs. These reports must follow all updated reporting requirements outlined in this Decision for the period from April 1, 2025 through June 30, 2025.

3.6. Data Confidentiality

3.6.1. Discussion

The *Ruling* asked parties if the AV data should be shared with stakeholders, and any constraints that might limit sharing with stakeholders. No claims of confidentiality have been made for any of the AV Pilot reports. Therefore, all existing AV Pilot reports are fully public and available on the Commission's website. For AV Deployment reporting, Cruise and Waymo have claimed confidentiality for certain information relating to trips, incidents and complaints, and EV charging.

San Francisco proposed that the Commission issue a confidentiality matrix with the new data reporting requirements to proactively settle confidentiality issues. San Francisco specified that license plates of fleet vehicles (such as those participating in the Commission's AV programs) and precise incident location data should be public. SFTWA agreed with San Francisco, arguing that data should be posted publicly with personally identifiable information redacted. SFTWA noted that additional information related to AV operations such as license plates and location information is disclosable because there are no privacy concerns as with human drivers. In response to San Francisco's arguments, Cruise and Zoox argued that the existing confidentiality rules under GO 66-D are sufficient.

3.6.2. Requirements for Claiming Confidentiality for AV Deployment Data Reporting

Currently, AV data submissions are subject to the provisions of GO 66-D unless modified by the assigned Commissioner in an open proceeding.²⁰ -The

²⁰ GO 66-D is available as Attachment 1 to D.20-08-031 at: <https://www.cpuc.ca.gov/-/media/cpuc-website/proceedings-and-rulemaking/documents/d2008031.pdf>.

Commission continues to use the provisions of GO 66-D for the assertion and evaluation of confidentiality claims for AV data submissions.

For the moment, the Commission need not resolve the substantive AV operator claims of confidentiality as they relate to deployment data reporting because there are new data reporting categories (*e.g.* citation, collision, and interruption data) that AV operators have not yet had an opportunity to address. Therefore, the Commission will wait until it has received a complete claim for confidentiality as to all required deployment data reporting categories (either on trade secret or privacy grounds, or both) that is made in conformity with the requirements of GO 66-D.

3.7. Staff Authority

3.7.1. Discussion

The *Deployment Decision* states that CPED “has the authority to create and modify the data reporting template as needed to ensure the reports capture all the information necessary to evaluate the AV programs.”²¹ In comments responsive to the *Ruling*, Waymo argued that CPED staff do not have the authority “to modify Commission-mandated requirements or add entirely new data elements.”

CPED recommends the Commission clarify staff’s authority in regard to modification of AV data reporting templates. While staff may not alter or amend a Commission order, staff should have the authority to create and modify the data reporting templates within the parameters set forth by the Commission. This includes refinements and additional details built upon the general categories and structure set forth by the Commission. These refinements may

²¹ *Deployment Decision* at 74.

include the addition of new reporting fields, or the elimination of reporting fields that are no longer necessary due to changed circumstances. In seeking this flexibility, staff intends to harmonize the Commission's data reporting requirements with those required by other regulatory agencies with jurisdiction over AV passenger service operators.

CPED claims that staff have applied this principle already. The *Deployment Decision* directed CPED to, in collaboration with stakeholders, develop a standard to identify and categorize complaints and incidents related to passenger or public safety.²² In doing so, CPED staff developed categorizations of incidents and complaints and implemented these as part of the aggregated Incidents and Complaints report currently included in the Deployment data reporting requirements. Given the evolving nature of AV technology and operations, it is critical that staff maintain flexibility to revisit and evolve data reporting requirements when reasonable.

3.7.2. Requirements

We agree that Commission staff should be given the authority to make additions and deletions to the AV reporting templates. These modifications may include, but are not limited to, adjustments to address or align with changes in the NHTSA Standing General Order or DMV reporting requirements, to address the precision of required GIS information, and/or to reduce duplicative requirements.

New information about AV passenger operations may become known that makes it necessary for the templates to be updated. Similarly, information once thought to be relevant may become moot or no longer needed as staff

²² *Id.*, at 61.

gathers more information about AV operators and their business models. In D.22-05-003, we granted similar authority permitting CPED to supplement the trip data requirements in D.13-09-045 and D.14-04-041 with data requests and reminder letters advising the TNCs to complete the additional data fields for their Annual Reports. The requests included additional granular data categories, along with a template and data dictionary for use in completing the Annual Reports.²³ These templates have evolved over time and were updated based on data received and information learned about TNC operations. Furthermore, in D.22-06-029, we affirmed staff's authority to update the templates as needed: "As such, we will permit staff to determine if the reporting categories are, in fact, duplicative and if some categories should be eliminated or revised in the future."²⁴

Accordingly, we find it prudent to vest staff with similar authority to adjust the AV reporting templates as needed to facilitate the Commission's receipt of updated and comprehensive data.

4. Summary of Public Comment

Rule 1.18 allows any member of the public to submit written comment in any Commission proceeding using the "Public Comment" tab of the online Docket Card for that proceeding on the Commission's website. Rule 1.18(b) requires that relevant written comment submitted in a proceeding be summarized in the final decision issued in that proceeding. No public comments have been received.

²³ D.23-12-015 at pp. 4-5; D.22-05-003 at FOF 2 and 3.

²⁴ D.22-06-029 at 30.

5. Comments on Proposed Decision

The proposed decision of Commissioner Matthew Baker in this matter was mailed to the parties in accordance with Section 311 of the Public Utilities Code and comments were allowed under Rule 14.3 of the Commission's Rules of Practice and Procedure. Comments were filed on September 26, 2024 by the Autonomous Vehicle Industry Association (AVIA), Cruise, San Francisco County Transportation Authority (SFCTA), San Francisco Municipal Transportation Agency (SFMTA), Waymo, and Zoox, and reply comments were filed on October by Cruise, SFCTA, SFMTA, Waymo and Zoox. We summarize the main comments and the Commission's disposition of same here. In doing so, we remind the parties that the Commission is not required to respond to any, let alone each, party comment received in response to a proposed decision.²⁵

Scope of the Commission's jurisdiction

AVIA and Zoox question the proposed scope of the AV data collection categories on the grounds that they extend beyond passenger safety and encroach upon the jurisdiction of the California Department of Motor Vehicles (DMV) and the federal government.

We reject this comment. The Commission has jurisdiction over transportation providers that receive permits from the Commission to carry passengers on public roads in California, and that jurisdiction is not limited to AVs. The Passenger Charter-party Carriers' Act outlines the Commission's mandate, goals, and intent in regulating AV passenger service. Thus, collecting this data will allow the Commission to assess passenger safety impacts of

²⁵ See D.20-05-027 at 6; D.19-01-051 at 48-49; and D.16-12-070 at 13.

stoppage events, information that may also be shared with the DMV as the agencies deem appropriate.

Data misinterpretation

AVIA and Waymo raise the concern of data interpretation. They assert that collecting data on routine driving tasks or general AV performance may mislead public interpretation and may not necessarily enhance safety oversight. To combat this potential outcome, they suggest that reportable events should be limited to events affecting passenger safety or AV performance and exclude reporting of routine stops which could obscure meaningful safety data.

The parties' concerns are premature. As data is collected, analyzed, and eventually made public (depending on how the trade secret and privacy claims are resolved), the Commission and its staff can determine how much information should be made public and in what format to minimize possible public confusion over the released data.

Regulatory objectives

AVIA and Waymo assert that all data reporting requirements should serve a clear regulatory purpose and not impose unnecessary burdens on AV operators.

These concerns are unfounded. The Commission has already taken measures to minimize the potential burden on the AVs. The Commission limits the reporting burdens by limiting which stoppage events must be reported. While responding may require AV operators to exert some effort, AV operators demonstrate that compliance would constitute such a financial burden that it would cripple their ability to continue their AV operations. Any such claimed burdens, if any, must be balanced against the Commission's goal of ensuring

safety in the AV industry in the long term through its collection and analysis of AV trip data.

Stoppage event reporting

Several of the parties have raised concerns about the scope of the definition of immobilization that was first proposed and have proposed a number of qualifications and corrections. Rather than set forth each proposed change, the Commission has considered all the comments in deciding to follow Waymo's suggestion of changing the term immobilization to stoppage event as defined in Section 3.4.2 of this decision.

As phrased, the definition also addressed the concern about establishing thresholds for stoppage events by simplifying the conditions for what constitutes a stoppage event. Additionally, and contrary to Waymo's suggestion, the definition of stoppage event is not limited to stops with passengers on board. If a vehicle is operating under a Commission permit authority, the AV operator must report the stoppage event, as a passenger could have also been in the vehicle, or that vehicle could have been en route to a waiting passenger who became temporarily or permanently stranded due to the stoppage event. Further, the Commission will permit staff to change the reporting requirement in the template to include a field that links to individual trips in the incident-level stoppage event reporting template that would link to the ride should it deem this necessary at a later date. Commission staff may make additional clarifications and or adjustments to the reporting template as needed to clarify the data each AV operator must report.

Pilot reporting

Waymo questions the need for trip data reporting in the pilot phase, asserting it would be overly burdensome and not align with the goals of the pilot program, ultimately hindering the safe and incremental of AV deployment.

The Commission disagrees that requirement reporting during the pilot phase is overly burdensome. To the contrary, it has been the Commission's experience that the pilot program reporting has been insufficient to aid staff's duty in investigating and evaluating AV operations in the pilot program phase.

The Commission is persuaded to alter the 300-mile threshold to a 300-trip threshold, but declines to lower or alter the threshold further. This threshold still provides an allowance for limited testing without the need for detailed reporting, while balancing the obligation for the Commission to monitor safety performance once autonomous vehicles begin to regularly carry passengers on public roads.

Finally, the Commission agrees with the suggestion that if an AV pilot participant provides no reportable service in a given quarter, that participant should only need to submit a simple attestation rather than a full report.

Collision reporting

Waymo and AVIA suggest that any reporting requirements should align with existing federal standards, particularly NHTSA, to avoid overlap or confusion in the reporting obligations. The Commission rejects this suggestion. The Commission establishes its own reporting requirements that will allow it to determine the nature of the collision and how they impact passenger safety. While other agencies may have similar objectives, the Commission is in the best position to determine how the collision information should be reported to its staff. While we retain our right to set necessary reporting requirements, we also

acknowledge that duplicative reporting may be burdensome and create confusion for both carriers and the public. Therefore, we have delegated authority to staff to alter reporting requirements as necessary to reduce duplicative reporting and align reporting with other agencies, as appropriate.

Implementation timeline

Waymo and AVIA argue that the proposed 60-day timeline for implementing the new data reporting requirements is insufficient for AV operators to develop and integrate necessary data collection processes. Waymo and Zoox suggest that the Commission extend the implementation period to at least 180 days following the adoption of the decision to ensure proper development and validation of reporting systems.

The Commission appreciates the concern but will not agree to a 180-day extension. Instead, the Commission adopts an implementation date of January 1, 2025 for the new data reporting requirements.

Citation reporting

SFCTA suggests that the Commission link the citations to individual trip IDs, and SFMTA suggests that the Commission require AV operators to include citation numbers in their template. The Commission declines to adopt reporting requirements that link incidents to trips at this time, but will adopt the requirement that citation numbers are reported as part of incident reporting.

Delegation of authority to staff

Waymo and Cruise oppose any increased delegation of authority to staff to implement the Commission's adopted data reporting requirements for AV operators. They claim that allowing staff to make substantive changes or new data requirements is an improper delegation of the Commission's policymaking authority that lacks explicit statutory authorization.

The Commission disagrees. What we adopt today will increase the Commission efficiency without requiring that there be a new rulemaking or petition for modification each time an adjustment to the data template is needed.

Data confidentiality

Waymo, Cruise, and Zoox support maintaining the current General Order 66-D process for claiming data confidentiality, without the Commission adding the additional requirements that the Commission adopted for the TNCs.

As we have stated above, the Commission continues to require AV operators to conform with the General Order 66-D process for the assertion and evaluation of confidentiality claims for AV data submissions.

Reporting Cadence

Waymo argues that reporting data on a monthly basis, let alone in real-time, is not reasonably feasible, and is unnecessary.

The Commission does not believe it is necessary to require real-time or monthly-basis data reporting for its regulatory purposes. Of course, if another regulatory agency such as the DMV adopts monthly data reporting, the Commission staff can decide if it wants the AV operators to share those monthly reports with the Commission.

Disabled rider access to AVs

In its decision, the Commission said it wanted to determine if those with disabilities were being provided with equal access to AVs. In response, Waymo suggests that due process requires that AV operators be afforded an opportunity to present testimony, additional data, and other evidence before the Commission reaches any findings or conclusions on these issues.

The Commission agrees. The assigned Commissioner, Administrative Law Judge, and staff can conduct fact-finding investigations to determine and report on how those with disabilities have been able to avail themselves to AV services.

6. Assignment of Proceeding

Matthew Baker is the assigned Commissioner and Robert M. Mason III and Debbie Chiv are the assigned Administrative Law Judges in this proceeding.

Findings of Fact

1. Participants in the Commission AV pilot and deployment programs are currently required to submit data on a quarterly basis using a template provided by the Commission's staff.

2. Participants in the AV Pilot program currently report aggregated (i.e. not trip-level) metrics around vehicle miles traveled, waiting time, vehicle occupancy, and wheelchair-accessible rides.

3. Participants in the AV Deployment program provide more detailed trip-level data, including zip code and census tract level locations, and counts of incidents and complaints.

4. Currently neither the AV Pilot program nor the AV Deployment program require AV participants to submit detailed information about non-collision incidents such as stoppage events.

Conclusions of Law

- It is reasonable to conclude that the AV trip data at issue will allow the Commission to determine if the AV operators are meeting their passenger safety requirements.

- It is reasonable to conclude that the AV trip data may also be useful to state, local, and federal regulators with responsibility for vehicle safety, roadway safety, roadway usage, and traffic management.

- It is reasonable to conclude that the AV trip data at issue will allow the Commission to evaluate if the AV operators are conducting their business in a nondiscriminatory manner.

- It is reasonable to conclude that the AV trip data at issue will allow the Commission to evaluate access to AV services by persons with disabilities.

- It is reasonable to conclude that the AV trip data will allow California to evaluate AV passenger services' impacts on California's goals of ensuring passenger safety, driver safety, consumer protection, and that the operators providing AV passenger services are fit to operate.

- It is reasonable to conclude that the AV trip data at issue will allow evaluation of the impact of AV vehicles on traffic congestion, infrastructure, and airborne pollutants, some of which are overseen by other state, local, and federal regulatory bodies.

- It is reasonable to conclude that Commission staff should be given additional authority to make adjustments (either additions or deletions) to the AV reporting templates without the need for a Commission decision modifying this decision.

O R D E R

IT IS ORDERED that:

1. Autonomous Vehicle (AV) operators participating in the AV Deployment program and Autonomous Vehicle operators participating in the AV Pilot program that exceed 300 passenger service trips in that quarter shall submit the disaggregated incident reporting in their reports to the Commission using the template that Commission staff will provide:

- Date and time of incident;

- AV Vehicle Identification Number;
- Location of incident including Latitude and Longitude, Zip Code and Census Tract number;
- Whether there was a citation and if so:
 - Type of violation, including reference to the code violated, as applicable;
- Whether the citation was associated with pickup or drop off (within the period beginning five seconds prior to AV arriving at the pickup/drop off location through five seconds after the AV departs the pickup/drop off location);
 - The entity issuing the citation.
- Whether there was a collision and if so:
 - Type of collision;
 - Parties involved in the collision; and
 - The identification of any reports made to the National Highway Traffic Safety Administration (NHTSA) pursuant to its Standing General Order 2021-01 on Incident Reporting for Automated Driving Systems and Level 2 Advanced Driver Assistance Systems (SGO); .
- Whether there was a complaint and if so:
 - The type of complaint (*e.g.* safety, pickup and drop off, lane blocking, accessibility, wheelchair accessibility, or customer service);
- Whether there was a claim of harassment and if so the type of harassment;
- Whether there was a claim of assault and if so the type of assault; and
- Whether there were payouts to parties involved in the incident and the total amount (if known).

2. The Autonomous Vehicle (AV) pilot program reporting requirements include the following:

- Participants in the Commission's AV Passenger Service Pilot (AV Pilot) programs reporting over 300 passenger service trips in a quarter shall submit the expanded data reports currently required of participants in the Phase I AV Passenger Service Deployment (AV Deployment) programs, as described in Decision 20-11-046 (Deployment Decision) as modified by Decision 21-05-017; and
- AV Pilot participants reporting no vehicle miles traveled in a quarter shall submit an attestation to that effect, rather than a full set of reports.

3. All Autonomous Vehicle (AV) data reports for all AV Pilot and AV Deployment participants shall be submitted as follows:

- All AV data shall be reported quarterly;
- Reporting quarters and deadlines shall be shifted to align with regular calendar year quarters: January 1 through March 31, reports due May 1; April 1 through June 30, reports due August 1; July 1 through September 30, reports due November 1; October 1 through December 31, reports due February 1; and
- Collection of any new data requirements adopted by the Commission will begin January 1, 2025.

4. Autonomous Vehicle (AV) Deployment participants shall simultaneously submit to the Commission unredacted collision reports currently submitted to the National Highway Traffic Safety Administration per its Standing General Order on Incident Reporting for Automated Driving Systems and Level 2 Advanced Driver Assistance Systems. When transmitting these reports to the Commission, carriers shall note the specific authority the AV was operating under when the collision occurred.

5. Autonomous Vehicle (AV) Deployment and AV Pilot participants exceeding 300 quarterly passenger service trips shall report incident-level and fleet-level data on stoppage events.

- Incident-level stoppage event data shall be reported for all stoppage events occurring in passenger service lasting two (2) minutes or more; and
- Fleet-level stoppage event data shall be reported for all stoppage events occurring in passenger service lasting 30 (thirty) seconds or more *and* all stoppage events where the AV required manual, in-person intervention.

6. The incident-level stoppage event reporting requirements adopted for Autonomous Vehicle (AV) operators are as follows for inclusion in their reports:

- Identifying information
 - Carrier Identification (ID);
 - Stoppage Event ID;
 - AV Vehicle Identification Number;
 - Duration of Stoppage Event Incident;
 - Date/time of initial stop (the time that AV stops which leads to the stoppage event); and
 - Date/time of resolution – no longer stopped due to manual removal, resuming normal operations, etc.;
- Location
 - Latitude and longitude of stop;
 - Whether the AV was stopped:
 - More than 18 inches from the curb;
 - Blocking a travel lane;²⁶
 - Blocking a travel lane designated for the exclusive use of public transit, blocking a transit vehicle stop,

²⁶ An AV is blocking a travel lane if it is stopped in a location where stopping and parking are not authorized at the time.

- or otherwise blocking the path of a public transit vehicle;
- Blocking a bike lane;²⁷;
- Blocking ingress to or egress from a fire station, blocking the path of first responders traveling code 3 with lights and sirens or within the perimeter of an emergency response scene;²⁸
- Blocking a crosswalk or a curb ramp;²⁹ and
- Within 7.5 feet of the nearest railroad, street railway, or light rail;³⁰
- Passenger impacts
 - If a passenger was present in the vehicle, and if so:
 - If the ride was completed to its original destination;
 - If the vehicle was en route to pick up a passenger; and
 - Report ID(s) associated with any report(s) made to National Highway Traffic Safety Administration (NHTSA) per the Standing General Order (SGO) in connection with this stoppage event:
 - Highest Injury Severity Alleged, per NHTSA SGO report(s);
- Resolution of stoppage event
 - How the stoppage event was resolved:
 - If manual in-person intervention was required; and
 - If the vehicle was manually removed (by carrier staff or designees, first responders, others), if it resumed

²⁷ An AV is blocking a bike lane if any part of the vehicle is obstructing the bike lane.

²⁸ An AV is blocking a driveway if any part of it extends into the driveway past either curb cut, where the curb begins to slope downward to street level.

²⁹ An AV is blocking a crosswalk if any part of the AV is within the marked area of the crosswalk or if any part of the AV is blocking a curb ramp located inside or adjacent to the crosswalk.

³⁰ See California Vehicle Code Section 22656.

normal operations (*e.g.*, continued on its journey), or other categories as applicable;

- For incidents involving manual in-person intervention, response time milestones:
 - Time of carrier staff (or designee) dispatch; and
 - Time of carrier staff (or designee) arrival.

7. The fleet-level reporting requirements adopted for Autonomous Vehicle (AV) operators for inclusion in their reports include:

- Count of manual removals (AV physically driven away, towed, or otherwise removed from the street);
- Count of relaunches where carrier staff responded in person, but the vehicle was able to resume normal operations (no manual removal);
- Average response time – duration between initial stop and staff arrival at vehicle; and
- Average resolution time – duration between initial stop and removal or relaunch;

For all stoppage events of 30 (thirty) seconds or more:

- Average resolution time – duration from initial stop to removal or resuming normal operations;
- Median resolution time – duration from initial stop to removal or resuming normal operations; and
- Percent of these stoppage events requiring manual removal.

8. If Autonomous Vehicle operators wish the Commission to treat data in their data submissions confidential, for now they are required to follow the protocol of General Order 66-D to establish a claim of confidentiality.

9. Commission staff shall have the authority to make adjustments (either additions or deletions) to the Autonomous Vehicle reporting templates attached

to this decision without the need for a Commission decision to modify this decision.

10. Rulemaking 12-12-011 remains open.

This order is effective today.

Dated November 7, 2024, at Bakersfield, California.

ALICE REYNOLDS
President
DARCIE L. HOUCK
JOHN REYNOLDS
KAREN DOUGLAS
MATTHEW BAKER
Commissioners