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California Department of Motor Vehicles
2415 First Avenue
Sacramento, CA 95818

Submitted via email: AutonomousVehicles@dmv.ca.gov

Re: Comments on Draft Autonomous Vehicle Regulations

To the California Department of Motor Vehicles (DMV):

Thank you for the opportunity to provide these comments. CalBike is a policy advocacy organization that supports the safety of pedestrians, bicyclists and all road users who choose to move through their cities using active transportation. We believe that it is critical to prioritize the safety of people biking and walking in the development of self-driving vehicle technology and its operation on our shared streets. Serious injuries and fatalities disproportionately impact people bicycling and walking, especially in our most disadvantaged communities. Autonomous vehicles (AVs) have the potential to improve the safety of people who bike and walk and provide opportunities for communities to create better places to use active transportation as vehicles become more law-abiding and predictable. However, potential for positive change may be thwarted if regulations do not take into account the specific vulnerabilities of people using active transportation. To that end, we offer the following recommendations to be incorporated into the draft regulations.

Safety Case Definition Expansion

We appreciate the inclusion of the “safety case” provisions as it further clarifies the need to protect road users from self-driving systems (SDS). However, we recommend that this definition be expanded to explicitly account for the unique safety needs and interactions of “vulnerable road users” (VRUs). The safety case should create a distinct object classification for VRUs along with demonstrating the evidence that AVs account for the unique behaviors of people walking and biking. By treating VRUs as a distinct class and thus unique, we can be better assured that AV safety reporting captures a variety of patterns of movement that may arise unpredictably on the roadway. AVs should demonstrate specialized, VRU-specific motion forecasting models, to account for a variety of VRU behaviors. Safety cases should capture when the self-driving vehicle encounters a VRU, the generation of multiple possible trajectories capturing the potential options of the VRU path thus enabling the SDS to better predict and

respond to the VRU actions. We recommend that the CA DMV compile and publishes aspects of safety cases related to interactions with bicyclists (and other VRUs) in order to develop best practices moving forward.

Disengagement Reporting

In § 228.40, Reporting Disengagement of Autonomous Mode in Article 3-8, we appreciate that it is possible for disengagement reporting to include whether a bicyclist, and other VRUs, interaction led to a disengagement. Although, the way the draft regulations appear, VRU interaction may only be required when it is the VRU action that is the reason for the disengagement. We would like to ensure the regulations ensure that any disengagement related to VRU interaction is reported as bicyclist/pedestrian-related, and not just be limited to VRU behavior. Capturing this distinct information will allow for safer interactions in the future between AVs and VRUs.

Vulnerable Road User Specificity

Throughout the draft regulations generic "others" or "other road users" is used rather than specific types of VRUs like bicyclists, pedestrians, or mobility-device users. This may be good for inclusivity, but may also mean that safety cases or other requirements are less specific and helpful for developing an understanding about how different types of VRUs are addressed. Pedestrians and bicyclists are likely the most common VRU and it could be helpful to have at least two specific types of other road users specified in order to get applicant companies to discuss how they differentiate between road users and address them differently, if they do.

Conclusion

AVs provide an opportunity to improve safety for all roadway users, including people who ride in motor vehicles, ride bicycles, and use mobility devices. Appropriately addressing the unique needs and behaviors of VRUs is critical to a future where AVs are a safe and effective transportation option. We appreciate the opportunity to comment on the proposed regulations. Should you have any questions or wish to discuss any of our comments further, please contact me at jared@calbike.org or (714) 262-0921.

Sincerely,



Jared Sanchez, Policy Director
California Bicycle Coalition