ADDENDUM: Operational Design Domain - Driverless Deployment in California

Per DMV amendment – 12/15/22

An "Operational Design Domain" (ODD) is the specific operating domain(s) in which an automated function or system is designed to properly operate, including but not limited to geographic area, roadway type, speed range, environmental conditions (weather, daytime/nighttime, etc.), and other domain constraints.[1]

As Cruise previously stated in its Approved Application, Cruise took an incremental approach and will initially deploy in an initial limited ODD. After this initial deployment, since receiving approval in September of 2021 and after several hundreds of miles of testing, including carrying members of the public for no charge, Cruise now seeks to expand its deployment ODD to all of San Francisco, as depicted in the map below.

As previously stated in Cruise's Approved Application, the Cruise vehicles that operate under the Driverless Deployment Permit are designed not to operate outside of their approved operational design domain. For example, Cruise's software will prevent the AV from routing to locations or on streets that are outside of the vehicle's operational design domain, which has been mapped in detail.

Level of Automation	Cruise vehicles under the driverless deployment permit meet the description of a Level 4 automated driving system under SAE International's *Taxonomy and Definitions for Terms Related to Driving Automation Systems for On-Road Motor Vehicles*, standard J3016 (SEP2016). Cruise's self-driving system is designed to perform the entire dynamic driving task within a defined operational design domain and has the capability to achieve a minimal risk condition without any expectation that a human driver will intervene.
Geographic Area	During driverless deployment, Cruise's intended operational design domain includes a geo-fenced area within the City and County of San Francisco, as depicted in the map below.
Roadway Type	During driverless deployment, Cruise's intended operational design domain will include local and arterial roads and will exclude bridges, tunnels, overpasses, and underpasses.
Speed Range	During driverless deployment, Cruise vehicles will operate at a maximum speed of 35 miles per hour.

[1] *See* 13 CCR § 227.02(j).

Weather Conditions	During driverless deployment, the intended operational design domain of Cruise vehicles will exclude the following weather conditions: - Heavy Fog - Heavy Rain - Heavy Smoke - Hail - Sleet - Snow
Time of Day	Cruise's intended ODD will be all hours of day and night.
Other Domain Constraints	When engaging in driverless deployment, Cruise may opt to further restrict certain domain constraints, such as limiting driverless deployment to: - Non-inclement weather conditions - Certain routes

The geographic boundaries of Cruise's intended operational design domain is reflected in the map below.

This map represents a snapshot of the streets and areas of exclusions, depicted in red, that Cruise has excluded from its ODD. Slow Streets are not full street closures and vehicles are limited to only local access trips and are encouraged to drive slowly to make the street safer for other users.[2] Cruise understands that San Francisco's Slow Streets program began as an emergency response to COVID-19. Given the dynamic nature of designated streets, they are not depicted as excluded streets in the map. Cruise continuously monitors and accounts for changes in designated Slow Streets.

[2] *See* https://www.sfmta.com/reports/about-slow-streets-faqs.