cruise

December 16, 2022

Advice Letter - 0002
(Cruise LLC PSG 0039080)

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA
Consumer Protection and Enforcement Division
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AVPrograms@cpuc.ca.gov

SUBJECT: Cruise Application for Driverless Deployment Permit ODD Expansion- Tier 2 Advice Letter

I. PURPOSE

Pursuant to Resolution TL-19137, Decision (D.) 20-11-046 and consistent with General Order ("GO") 96-B, Cruise LLC ("Cruise") hereby respectfully submits to the California Public Utilities Commission ("Commission or CPUC") Cruise's Tier 2 Advice Letter application for a service expansion of its Driverless Deployment permit issued pursuant to the Commission's Phase I Driverless Autonomous Vehicle ("AV") Deployment Program ("Driverless Deployment Program") under Cruise's Charter-Party Carrier Class "P" Permit. Cruise's updated Passenger Safety Plan ("PSP") is included as Attachment 1 to this Tier 2 Advice Letter.

II. BACKGROUND

In D.18-05-043, the Commission authorized a pilot test program for autonomous vehicle passenger service with drivers and a pilot program for driverless autonomous vehicle passenger service.[1] Cruise received approvals to participate in both pilot programs on February 29, 2020 and June 4, 2021, respectively.

In D.20-11-046 ("Decision"), the Commission created two new autonomous vehicle programs that authorized fare collection, one for drivered autonomous vehicles and the other for driverless

[1] Decision Authorizing a Pilot Test Program for Autonomous Vehicle Passenger Service With Drivers and Addressing in Part Issues Raised in the Petitions for Modification of General Motors, LLC/GM Cruise, LLC, Lyft, Inc., and Rasier-CA, LLC/UATC, LLC for Purposes of a Pilot Test Program for Driverless Autonomous Vehicle Passenger Service, D.18-05-043 (Cal. P.U.C. May 31, 2018).

autonomous vehicles ("deployment programs").[2] On November 5, 2021, Cruise submitted an application in the form of a Tier 3 Advice Letter, Cruise-0001, to the Commission for a permit to participate in the Commission's Phase I AV Driverless Deployment Program. On June 6, 2022, the Commission issued Resolution TL-19137 approving Cruise's application and authorizing Cruise to collect fares for rides under its Driverless Deployment Permit.[3] Cruise's initial deployment was limited in geography and daily hours of operation and by certain operational conditions as set forth in Cruise's Limited Operational Design Domain ("LODD") approved by the California Department of Motor Vehicles ("DMV") on September 30, 2021.[4]

On March 24, 2022, Cruise submitted to the California DMV an amendment to Cruise's Autonomous Vehicle Deployment (AVD) Program Application - Driverless Vehicles ("DMV Expansion Amendment") to expand its LODD. The California DMV approved Cruise's DMV Expansion Amendment on December 15, 2022. A copy of the DMV's approval is included as Attachment 2 to this Tier 2 Advice Letter.

Resolution TL-19137 directs that Cruise may not "expand the hours, geography, roadway types, speed range, or weather conditions of its driverless deployment operations or make any other operational changes that would materially affect the approaches in its Passenger Safety Plan" until Cruise provides the Director of the Consumer Protection and Enforcement Division ("CPED") with an updated PSP by way of a Tier 2 Advice Letter and the Tier 2 Advice Letter has been approved by CPED.[5] Accordingly, Cruise hereby submits this Tier 2 Advice Letter, along with an updated PSP, to expand the scope of its AV service under its existing Driverless Deployment Permit.

III. PROPOSED SCOPE OF EXPANDED AV PASSENGER SERVICE

Cruise's Driverless Deployment Program will continue to provide non-pooled rides for members of the public. This program will be expanded in geography to the entire 7x7 of San Francisco; in daily hours of operation to 24 hours, 7 days a week; and to the operational conditions listed below, as set by Cruise's Expansion Amendment approved by the California DMV on December 15, 2022. The DMV approved the following modifications:

- Geographic Area - expand to all of San Francisco[6]
- Roadway Type - expand to allow for the removal of the exclusions of steep hills and roundabouts

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[2] Decision Authorizing Deployment of Phase 1 Drivered and Driverless Autonomous Vehicle Passenger Service, D.20-11-046 at p. 2 (Cal. P.U.C. Nov. 19, 2020), as modified by Order Modifying Certain Holdings of Decision 20-11-046 and Denying Rehearing of the Decision, as Modified, D.21-05-017 (Cal. P.U.C. May 6, 2021) ("D.20-11-046").

[3] *See* Resolution TL-19137 (Cal. P.U.C. June 2, 2022), https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M483/K544/483544466.PDF.

[4] An "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. *See* Cal. Code Regs. tit. 13, § 227.02(j) (2022).

[5] Resolution TL-19137, at OP 5-6.

[6] *See* ODD map in Section 8.1 of the PSP.

- Speed - expand to allow for operations up to a maximum speed of 35 mph
- Time of Day - expand to allow for operations 24 hours, 7 days a week

As part of its expanded AV passenger service, Cruise initially will deploy a fleet of 100 Cruise AVs. The number of AVs operating may vary based on ride-hail demand and other factors.

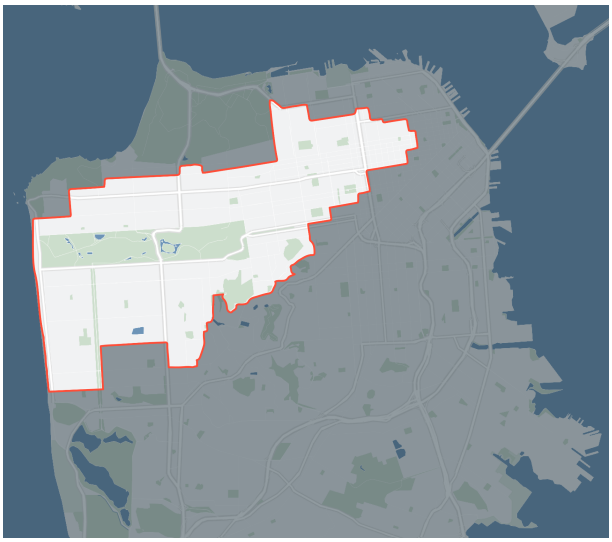
Cruise has taken a measured approach to expanding its driverless operations, first proving out its capabilities in simple environments, such as our LODD, and gradually increasing scale and complexity. Cruise has driven nearly five million total miles and over 600,000 driverless miles. Under its Driverless Deployment Deployment permit, Cruise has completed over 10,000 driverless rides and over 4,000 fared rides.[7] Since receiving its Driverless Deployment Permit, Cruise has achieved a number of historical milestones:

- Early June 2022: Completed the first public fully driverless fared ride in California
- Late August 2022: Expanded un-fared service for internal Cruise riders and select public passengers to nearly 70% of San Francisco from 9PM - 5:30AM (see Expansion 1 visual below)
- Early November 2022: Further expanded un-fared service for internal Cruise riders and select public passengers to nearly all of San Francisco from 9PM - 5:30AM (see Expansion 2 visual below)
- Mid-November 2022: Launched the opening of un-fared driverless daytime rides for internal Cruise riders from 5:30AM - 9PM (see Expansion 3 visual below)
- Early December 2022: Expanded un-fared service for students of the University of San Francisco to nearly all of San Francisco from 9PM - 5:30AM (see Nighttime in Expansion 3 visual below)

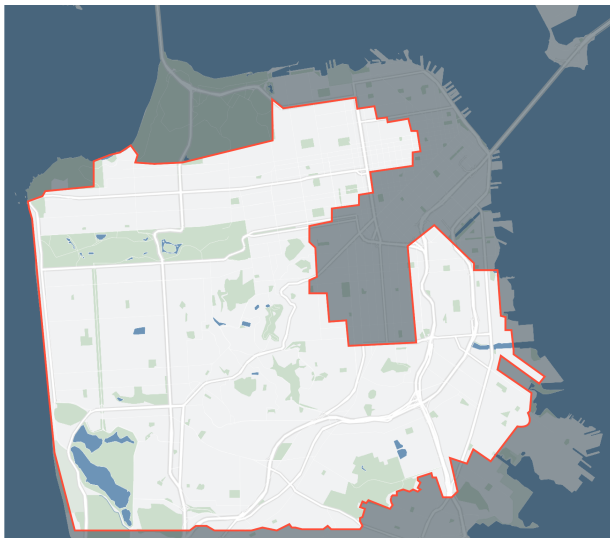
[7] As of mid December 2022.

Expansion 1:

Limited ODD

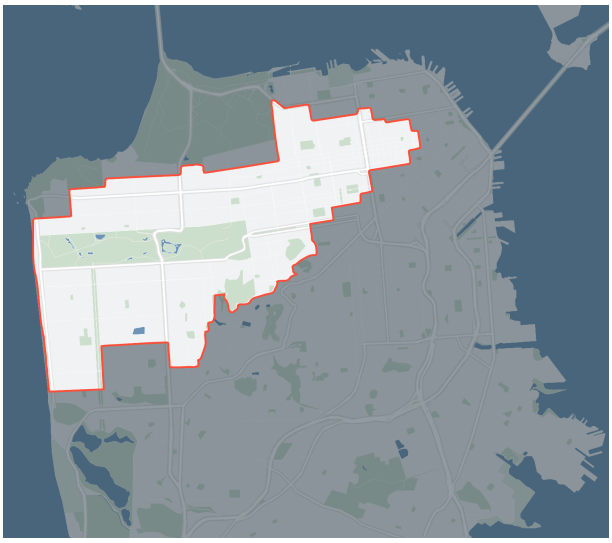


Aug 2022

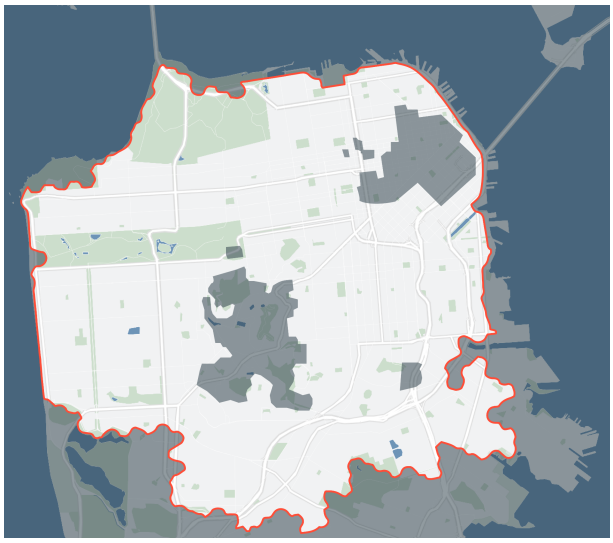


Expansion 2:

Limited ODD

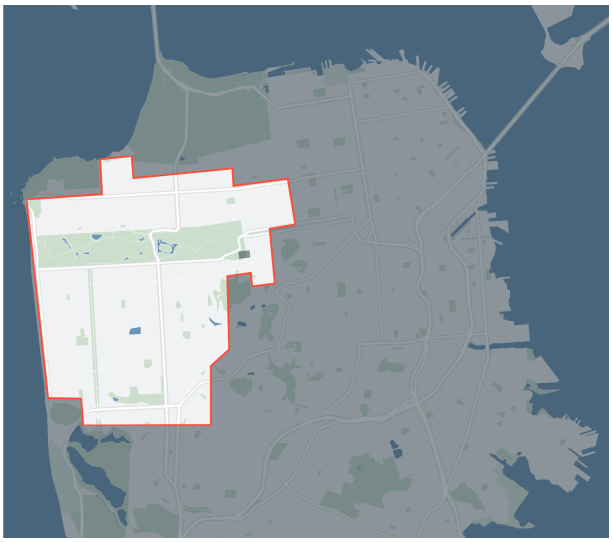


Nov 2022

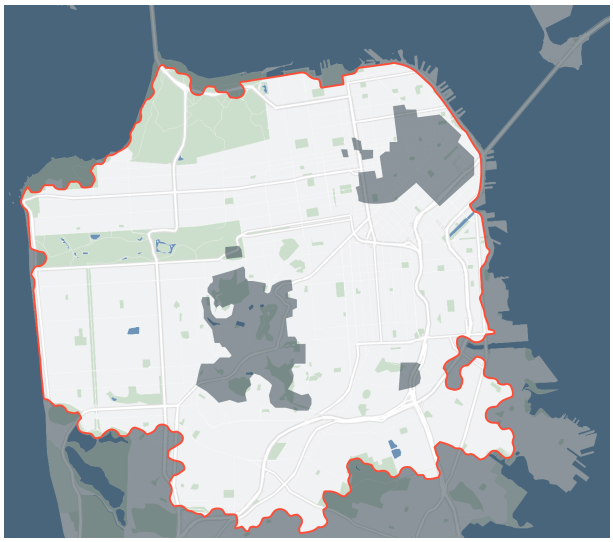


Expansion 3:

Daytime



Nighttime



IV. ALIGNMENT WITH COMMISION GOALS

The Decision established four goals for the deployment programs: (1) Protect passenger safety; (2) Expand the benefits of AV technologies to all Californians, including people with disabilities; (3) Improve transportation options for all, particularly for disadvantaged communities and low-income communities; and (4) Reduce greenhouse gas emissions, criteria air pollutants, and toxic air contaminants, particularly in disadvantaged communities.[8] Cruise is committed to all of these goals, and our expanded Driverless Deployment Program will provide the opportunity to continue to meet, as well as further advance, those goals.

Cruise is an all-electric self-driving technology company founded in San Francisco in 2013 with a mission to build the world's most advanced AV to safely connect people to the places, things and experiences they care about. Our all-electric AV fleets can improve current transportation systems by offering an AV service for passengers that connects, supports, and strengthens the communities we serve in a safer, more inclusive, more accessible and more sustainable way. Cruise's technology has been developed through many years of safe operation, millions of miles of on-road testing, extensive closed course testing, and advanced simulation testing. These efforts culminated in Cruise's launch of its Driverless Deployment Program in June 2022 and will continue with its expanded Driverless Deployment Program.

As Cruise's Passenger Safety Plan demonstrates, Cruise's safety focus goes beyond the safety of our AVs – Cruise also has designed and implemented policies and procedures to minimize risk for

[8] D.20-11-046, at p. 2.

all passengers and residents in the areas we serve, including people with disabilities and other vulnerable road users. Cruise's updated Passenger Safety Plan includes new policies and procedures to support customer safety that encompass and reflect the expanded scope of Cruise's Deployment Program, such as new geographies and roadway types. These Passenger Safety Plan updates are summarized further below.

Cruise recognizes the importance of engaging the communities we serve to continue to earn trust. We continue to be deliberate in our approach in communities that historically have been most impacted by environmental injustice and transportation inequity. Cruise for Good - our ongoing social impact program launched in 2021 to allocate at least 1% of Cruise's zero-emission AV fleet in service of low-income and disadvantaged communities in San Francisco and beyond - reflects these values.[9] Cruise for Good builds on our "Stand with San Francisco" initiative, launched in April 2020. Recognizing the acute needs of those experiencing hunger in our communities, Cruise partnered with the San Francisco-Marin Food Bank and SF New Deal to redeploy our AV fleet to support these local food providers in delivering meals and groceries to food-insecure households across San Francisco.[10] Through these partnerships, Cruise has delivered more than 2.4 million meals, with more than 80% of these deliveries have been to households in zip codes below the San Francisco poverty line.[11] Use of our zero emission fleet, powered by 100% clean renewable energy sourced from family-owned farms in the Central Valley through our industry-leading Farm to Fleet initiative, also has contributed to San Francisco's and California's climate goals. To date, our Cruise for Good deliveries alone have offset over 100 metric tons of CO_2 emissions that would have otherwise been emitted if these deliveries had been made in gas-powered cars. Our Farm to Fleet initiative also has allowed us to expand the benefits of our technology to California communities that we do not yet serve - with every clean mile we drive in California, we generate new financial opportunities for the family-owned farms and businesses participating in our Farm to Fleet initiative.

As part of our ongoing efforts to foster trust with communities, Cruise has regularly engaged with a broad range of users and advocacy organizations – in San Francisco and at the state and national levels – to hear feedback, share progress and gain insights that can ultimately improve service for more riders (such as through user experience testing). Cruise will continue to engage a range of accessibility stakeholders from across the disability spectrum to inform Cruise's service, product and processes.

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[9] For more details, *see* Cruise, Community, https://www.getcruise.com/community.

[10] *See* Robert Grant, Cruise's Self-Driving Fleet Makes 50,000 Contactless Deliveries & Counting, Medium (July 12, 2020), https://medium.com/cruise/cruise-self-driving-fleet-deliveries-2f83442cf9f3.

[11] Cruise calculates its low-income zip-code deliveries based on zip-code median household income results from the U.S. Census Bureau American Community Survey (using the most recent year available with zip-level income data) and compares it to the U.S. Department of Housing and Urban Development's Median Household Income Calculator to approximate the city's "Low Income" line.

In addition to advancing the Commission's established goals, the following information demonstrates Cruise has met the requirements set forth in the Decision, Resolution TL-19137 and General Order 157-E.[12]

V. COMPLIANCE WITH D.20-11-046 AND RESOLUTION TL-19137

A. PASSENGER SAFETY PLAN

The Decision requires a PSP that describes policies and procedures to minimize risk for all passengers in driverless vehicles.[13] Resolution TL-19137 requires an updated PSP when driverless deployment operations are expanded in hours, geography, roadway types, speed range, or weather conditions or when there are operational changes that materially affect the approaches in the PSP.[14]

Below are the PSP components set forth in Ordering Paragraphs (OP) 8-10 of the Decision applicable to Cruise's AV service[15] and the relevant section of Cruise's updated PSP that addresses each component:

- Minimize safety risks to passengers traveling in a ride operated without a driver in the vehicle [PSP, Section 4.6]
- Respond to unsafe scenarios outside and within the vehicle, such as hostile individuals [PSP, Section 6]
- Educate and orient passengers about the technology, experience and safety procedures [PSP, Section 4]
- Ensure customers can safely identify, enter and exit the AV they requested [PSP, Section 4.4]
- Enable passengers to contact the AV service provider during the ride and ensure the passengers receive a timely and complete response [PSP, Section 5]
- Collect, respond to and retain any passenger comments and complaints [PSP, Section 5.4]
- Ensure the safety measures described above are accessible to and apply to all passengers, including those with limited mobility, vision impairments or other disabilities [PSP, Sections 2.3 and 4-6]
- Anticipated response time to passenger requests to contact the AV service provider [PSP, Section 5.1] and
- Written COVID-19 Emergency Plan as required by Resolution TL-19131 [PSP, Section 3].

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[12] Cruise has grouped the requirements set forth in D.20-11-046 and General Order 157-E by topic to streamline the discussion and avoid repetition.

[13] D.20-11-046, at pp. 136-37, OP 8-10, as modified by D.21-05-017.

[14] Resolution TL-19137, OP 5.

[15] OP 8 of D.20-11-046 provides that a PSP must detail how an applicant will minimize safety risks to passengers traveling in a shared driverless ride, including prevention and response to assaults and harassments. *See* D.20-11-046 at pp.136-37, OP 8, as modified by D.21-05-017. As set forth in Section III of this Advice Letter, Cruise will not be offering driverless pooled rides as part of its expanded Driverless Deployment Program. *See also* Attachment 1 (PSP) at Section 2.2.

The following sections of the PSP have been updated or added to address Cruise's expansion of its AV service:

- Scope of Deployment [PSP, Section 2.1]
- The Passenger Experience and Safety [PSP, Section 4.3]
- Passenger Safe Ingress and Egress [PSP, Section 4.4]
- Safe Arrival and Exiting [PSP, Section 4.5]
- Operational Design Domain and Avoidance Areas [PSP, Section 4.6.2]
- Transit and Rail Safety [PSP, Section 4.6.3]
- Share My Ride [PSP, Section 4.6.5]
- Cruise Teams Supporting Passenger Safety [PSP, Section 5.5]
- Operational Design Domain [PSP, Section 8.1]

Cruise's updated PSP (Attachment 1) thoroughly describes the policies and procedures to minimize safety risk to passengers in our Cruise AVs and fully meets the requirements set forth in the Decision and Resolution TL-19137.

B. DMV DEPLOYMENT PERMIT AND EXPANSION AMENDMENT

The Decision states that permit-holders participating in the Driverless Deployment Program shall, among other things, "[h]old a California Department of Motor Vehicles Autonomous Vehicle Deployment Permit and certify that the entity is in compliance with all Department of Motor Vehicles regulations"[16] and "[m]aintain insurance for the Autonomous Vehicle offered for Driverless Autonomous Vehicle Passenger Service in compliance with Department of Motor Vehicles regulations."[17] On September 30, 2021, Cruise received approval of its DMV Autonomous Vehicle Deployment Permit. On December 15, 2022, Cruise received approval from the DMV of its Expansion Amendment to its Autonomous Vehicle Deployment Permit. *See* Attachment 2 for the DMV approval of Cruise's Expansion Amendment. Cruise also provides its Certification of Compliance as Attachment 3.

C. EXPANDED DATA REPORTING PLAN

The Decision requires permit-holders participating in the Driverless Deployment Program to "[t]ransmit to the Commission quarterly reports of data about the operation of their vehicles providing Driverless AV Passenger Service."[18] Since 2019, Cruise has been submitting quarterly reports to the Commission. Most recently, Cruise submitted the required quarterly report under Cruise's Driverless Deployment Permit. Cruise will continue to provide quarterly reports as required

[16] D.20-11-046, at p. 129, OP 7b, as modified by D.21-05-017.
[17] *Id.* at p. 129, OP 7c, as modified by D.21-05-017. Cruise provided an updated certificate of insurance to the DMV as part of its Expansion Amendment application.
[18] *Id.* at p. 131, OP 7m, as modified by D.21-05-017.

by D.20-11-046 and will seek confidential treatment pursuant to General Order 66-D, as appropriate.

D. TRANSMIT ALL DMV REPORTS TO THE COMMISSION

The Decision requires permit-holders participating in the Driverless Deployment Program to simultaneously transmit to the Commission "all reports required by Department of Motor Vehicles regulations."[19] Accordingly, Cruise has provided and will continue to provide to the Commission the following reports:

- Process in the event of a collision;[20]
- Law enforcement interaction plan;[21]
- Disclosure to the passenger regarding collection and use of personal information;
- Collision reporting; and
- Annual Autonomous Vehicle disengagement reports.

E. NOTICE TO PASSENGERS AND PASSENGER CONSENT

Consistent with the Decision,[22] Cruise's PSP addresses Cruise's plan for providing notice to the passenger that they are receiving Driverless Autonomous Vehicle Passenger Service and how the passenger can affirmatively consent to or decline the service.[23]

F. PHOTO OF THE VEHICLE TO PASSENGER

The Decision requires Cruise to provide a photo of the AV that will provide the service to the passenger.[24] In Section 4.4 of the PSP, Cruise has included examples of the photo of the AV that will provide the service and that will be provided to the passenger.[25]

VI. COMPLIANCE WITH GENERAL ORDER 157-E

The Commission's Driverless Deployment Program authorizes entities that hold a Transportation Charter-Party Carrier permit (Class "P" permit or a Class "A" certificate) to add autonomous vehicles to their passenger carrier equipment statement and provide AV service to passengers. Specifically, Transportation Charter-Party Carrier permit-holders participating in the Driverless Deployment Program must "[h]old and comply with all standard terms and conditions of the California Public

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[19] *Id.* at p. 130, OP 7g, as modified by D.21-05-017.
[20] Cruise also describes its process in the event of a collision in its PSP. *See* Attachment 1 (PSP) at Section 6, Incident Response, and Exhibit A.
[21] Cruise also has attached its Law Enforcement Interaction Plan to its PSP. *See* Attachment 1 (PSP) at Exhibit A. *See also* Cruise, Cruise Resources for First Responders (updated Dec. 15, 2022), https://www.getcruise.com/firstresponders.
[22] D.20-11-046, at p. 130, OP 7h, as modified by D.21-05-017.
[23] *See* Attachment 1 (PSP) at Sections 2.2 and 4.
[24] D.20-11-046, at p. 130, OP 7i, as modified by D.21-05-017.
[25] *See* Attachment 1 (PSP) at Section 4.4.

Utilities Commission's Transportation Charter-Party Carrier permit; including ensuring that remote operators comply with all terms and conditions applicable to drivers."[26] General Order (GO) 157-E contains the rules and regulations governing the operations of Transportation Charter Party Carriers of passengers.

Cruise has maintained its Transportation Charter-Party Carrier Class P permit and is in compliance with its terms and conditions and General Order 157-E, with the exception of the exemption detailed in Section VII. Below is a high level summary demonstrating Cruise's compliance with GO 157-E:

A. GENERAL REQUIREMENTS AND RESTRICTIONS
    1. Prearranged Transportation: Cruise will provide passenger service only on a prearranged basis and will maintain waybill information required by Rule 3.01.
    2. Operations at Airports: Cruise will not conduct any operations on the property of or into any airport unless such operations are authorized by both this Commission and the airport authority involved.

B. VEHICLE REQUIREMENTS
    1. Current Equipment Statement: Cruise's equipment list of all vehicles (owned or leased) in use under its Class P permit is up to date. Please also refer to Section VII below.
    2. Vehicle Inspections: Cruise conducts vehicle inspections and maintenance consistent with the requirements of the TCP permit.
    3. Vehicle Inspection Records: Cruise maintains records demonstrating that every vehicle used in its operations complies with the 19-point vehicle inspection requirement. These records are maintained for a period of three years.

C. DRIVER REQUIREMENTS
    1. Employer Pull Notice Program: Cruise will continue its participation in the Department of Motor Vehicles' Employer Pull Notice Program, as required.

D. RECORDS AND INSPECTIONS: Cruise maintains all charter-party records, as described in Rule 6.01, for a period of three years and will afford representatives of the Commission "all reasonable opportunity and facilities" to inspect such records.

E. COMPLAINTS
    1. Requirement to Answer Complaints: Cruise will respond within 15 days to any written complaint concerning transportation services provided and inquiries from Commission staff regarding complaints and provide copies of any requested correspondence and records.

[26] D.20-11-046, at p. 129, OP 7(a), as modified by D.21-05-017.

2. Communications Between Passengers and Remote Operators: Cruise will record all communications from passengers in the AVs with the remote operator while Driverless AV Passenger Service is being provided and retain the recording for one year from the date of the recording. The recordings will be provided to the Commission upon request.

F. TRANSPORTATION OF MINORS: The Driverless Deployment Program will not permit the transport of unaccompanied minors.

VII. EXEMPTION APPROVAL

Resolution TL-19137 approved Cruise's request for an exemption to Part 4.01 of General Order 157-E for its Driverless Deployment program.[27] Accordingly, Cruise may use vehicles that are owned or leased by General Motors Company LLC ("GM"), rather than directly by Cruise itself. The ODD expansion does not affect or impact this exemption approval. Cruise will manage the Driverless Deployment Program and has authority to manage or direct the use of any equipment made a part of the Program. Cruise will satisfy all other vehicle requirements under GO 157-E. The Driverless Deployment Program operations will be functionally equivalent under GO 157-E.

VIII. EFFECTIVE DATE

Pursuant to General Order (GO) 96-B, Ordering Paragraph 20 of D.20-11-046, as modified by D.21-05-017, and Ordering Paragraphs 5 and 6 of Resolution TL-19137, this Advice Letter is submitted with a Tier 2 designation. Cruise requests that this Tier 2 Advice Letter become effective upon CPED approval.

IX. PROTESTS AND RESPONSES

According to GO 96-B, Section 7.4, "Any person (including individuals, groups, or organizations) may protest or respond to an advice letter" within 20 days of the submission date of the advice letter. Pursuant to GO 96-B, Section 3.11, "The protest shall contain the following information: specification of the advice letter protested; grounds for the protest [*see GO 96-B, Section 7.4.6*]; supporting factual information or legal argument; name, telephone number, postal address, and (where appropriate) e-mail address of the protestant; and statement that the protest was sent to the utility [*Cruise*] no later than the day on which the protest was submitted to the reviewing Industry Division [*CPED*]." Protests and responses must be submitted to:

The CPUC Consumer Protection and Enforcement Division:

DOUGLAS ITO
California Public Utilities Commission
Consumer Protection and Enforcement Division

[27] Resolution TL-19137, OP 4.

505 Van Ness Avenue
San Francisco, CA 94102-3214
douglas.ito@cpuc.ca.gov

and to AVPrograms@cpuc.ca.gov.

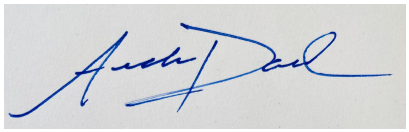
The protests and responses shall also be sent on the same date it is delivered to the Commission to Cruise via email to:

PRASHANTHI RAMAN at prashanthi.raman@getcruise.com
AICHI DANIEL at aichi.daniel@getcruise.com
Cruise LLC
333 Brannan St.
San Francisco, CA 94107

X. SERVICE

As directed by D.20-11-046, and in accordance with GO 96-B, a copy of this Advice Letter is being sent electronically to the parties on "all of the Transportation Network Company rulemakings service lists,"[28] which are the attached service lists for R.12-12-011, R.19-02-012 and R. 21-11-014. For address changes to any of the service lists, please contact the Commission's Process Office at (415) 703-2021 or at Process_Office@cpuc.ca.gov.

Respectfully submitted,



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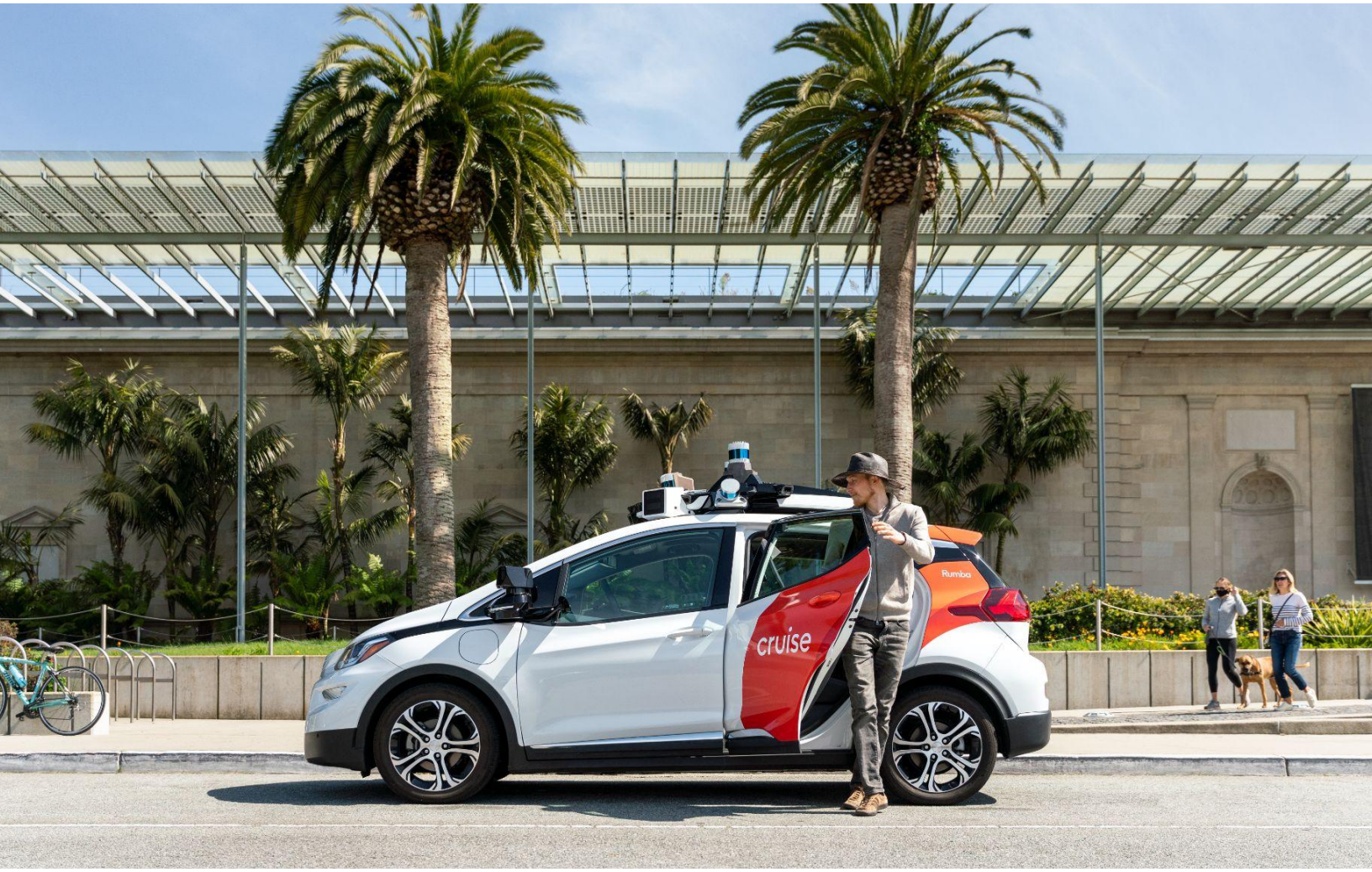
[28] D.20-11-046, at p.139, OP 18, as modified by D.21-05-017.

ATTACHMENT 1

cruise

Passenger Safety Plan

December 2022



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1. Introduction

Cruise LLC ("Cruise") was founded on the premise that the status quo of transportation is unacceptably unsafe. That is why safety is the driving force behind everything we do — from our purpose-built vehicle designs, to our self-driving system, and to protecting our passengers and all who share the road. Cruise's mission is to provide passengers with a safe, reliable, all-electric, renewable energy-powered, self-driving transportation option that can connect people to the places and experiences they care about.

Safety has been Cruise's guiding principle since Cruise was founded in 2013, and will continue to guide Cruise as we expand our self-driving service. At Cruise, safety is not just about complying with the vehicle code or a single static metric. Rather, Cruise takes a holistic and comprehensive approach to safety. Consistent with Decision 20-11-046 of the California Public Utilities Commission ("CPUC") and Ordering Paragraphs 8-10,[1] this Passenger Safety Plan ("PSP") reflects that extensive approach and describes in detail how Cruise will protect the safety, health and well-being of our passengers. Contributors to this PSP include individuals with comprehensive safety experience from the automotive industry as well as other relevant industries, such as transportation, technology, electric utilities, aerospace, accessibility, defense, and law enforcement. Additionally, these contributors have subject matter expertise across vehicle safety, human factors and systems engineering, fleet operations, ride-hail service product development, ride-hail customer service, and incident response.

Cruise takes seriously the trust that our passengers, regulators, and the general public place in our service. As our commercial service grows, Cruise will continue, as we have to date, to improve the safety and quality of our service and product by incorporating feedback from our passengers, industry regulators, and our valued community stakeholders.

2. Cruise Autonomous Vehicle Passenger Service

2.1. Scope of Deployment

Following the CPUC's issuance of Resolution TL-19137 on June 2, 2022,[2] Cruise's initial driverless deployment service began with a scope limited in geography, daily hours of operation, and certain weather conditions. These limitations were in line with the parameters set by the Operational Design Domain ("ODD") in Cruise's Autonomous Vehicle Deployment Permit and approved by the

[1] Decision Authorizing Deployment of Phase I Drivered and Driverless Autonomous Vehicle Passenger Service, D.20-11-046 at p. 136, OP 8-10 (Cal. P.U.C. Nov. 19, 2020), as modified by Order Modifying Certain Holdings of Decision 20-11-046 and Denying Rehearing of the Decision, as Modified, D.21-05-017 (Cal. P.U.C. May 6, 2021) ("D.20-11-046").

[2] Resolution TL-19137 (Cal. P.U.C. June 2, 2022) (approving Cruise's application for a permit to participate in the Phase I Driverless Autonomous Vehicle Passenger Service Deployment Program).

California Department of Motor Vehicles ("DMV") on September 30, 2021.[3] After millions of miles of testing, including carrying members of the public for no charge, Cruise filed an amendment to its DMV Autonomous Vehicle Deployment Permit to expand its ODD. On December 15, 2022, Cruise received approval from the DMV to expand its ODD to the full 7x7 San Francisco during all hours, day and night. Accordingly, Cruise's Driverless Deployment Program will expand to all of San Francisco for ride-hail operations 24 hours, 7 days a week.[4] Cruise will initially deploy a fleet of 100 Cruise AVs and gradually expand. The number of AVs operating may vary based on ride-hail demand and other factors.

Cruise's self-driving system is designed to ensure that our AVs do not operate in autonomous mode outside of their ODD. The AVs in our Driverless Deployment Program will provide service to passengers only in the designated ODD and will avoid streets.[5] Roadway features like traffic lights, stop signs, lane merges, and markings are embedded in on-board maps and detected in real-time by the AV's sensors so they can be obeyed. Cruise also keeps its on-board map up-to-date so that our AVs maintain current information about the road. Cruise's software prevents the AV from routing to locations or on streets that are outside of the vehicle's ODD.

2.2. Cruise Service and No Pooled Rides

Passengers requesting a ride in Cruise's Driverless Deployment Program are required to agree to Cruise's Customer Agreement before creating an account to use Cruise's service. We also provide Cruise Community Rules to every passenger.[6] The Cruise Community Rules cover our expectations for passenger conduct and safety behaviors when using our service. Examples of Community Rules include the following:

- Only bring items into the AV that can be safely and securely stowed during operation of the AV
- Do not bring illegal substances, hazardous materials, highly flammable materials, or any kind of weapon into the AV
- Safely enter and exit our AVs - watch out for other passengers, pedestrians, cyclists, and other road users

Violation(s) of the Customer Agreement or the Cruise Community Rules will be grounds for suspension or termination of a passenger's account and their ability to use our service.

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[3] An "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. *See* Cal. Code Regs. tit. 13, § 227.02(j) (2022). *See also* Appendix 8.1 for Cruise's current ODD, approved by the California DMV. Cruise's California DMV-approved ODD is subject to change pursuant to DMV regulations, including section 228.10 of Title 13 of the California Code of Regulations. However, ODD expansion will not materially affect Cruise's operations as outlined in this PSP.

[4] *See* Section 8.1 for the changes to Cruise's ODD approved by the DMV.

[5] *See* Section 8.1.

[6] *See* Cruise, Cruise Community Rules, https://www.getcruise.com/terms/us/ridehail/community-rules. Passengers also have access to a QR code on the in-vehicle touchscreen to view Cruise's terms and privacy policy.

Currently, Cruise is not offering driverless pooled rides. We may update our approach in this PSP when we seek Commission approval to launch driverless pooled rides in the future. Any change in approach will be informed by our learnings during the Driverless Deployment Program and engagement with interested stakeholders.

Consistent with Decision 20-11-046, Cruise prohibits the transport of unaccompanied minors in any AV passenger service in California.[7] Cruise's Customer Agreement requires users to certify that they are at least 18 years old before creating an account. Under the Customer Agreement, individuals under the age of 18 are not allowed to create an account or hail rides and account holders are not allowed to permit a minor to ride without being accompanied by someone over the age of 18. Violation of the Customer Agreement's restrictions on the use of Cruise's service by unaccompanied minors may result in the suspension or termination of a passenger's account and their ability to use our service. In addition, where a minor accompanies an adult passenger, the adult passenger will be able to access instructions in the mobile app describing how to properly install child seats, if appropriate. The Cruise AV also has anti-tampering features, including physical barriers, outlined in Section 4.4 below, that prevent minors and other passengers from interfering with any vehicle controls when accompanying adult passengers.

2.3. Accessibility

2.3.1. Accessible Safety Measures

Cruise understands the need for accessible design and how accessibility can benefit the safety of all passengers, including those with disabilities. Our Driverless Deployment Program complies with our legal accessibility obligations, including accommodations for service animals, which are allowed in Cruise vehicles, and other means of supporting access, as described below. Cruise continues to develop strong relationships with organizations and advocates across the disability community to hear from a broad range of voices and perspectives as we work toward our goal of designing and building an accessible service for more communities. We have conducted iterative research studies and focus groups with a number of users and through engagement with partners from the National Federation of the Blind, American Council of the Blind and the San Francisco Lighthouse for the Blind to understand how Cruise may help address existing accessibility challenges in ride-hailing, such as locating the Cruise AV at pickup and understanding route progression during a ride. This research has been instrumental to our efforts to build and operate an accessible ride-hail service that minimizes safety risks to passengers traveling in a driverless vehicle.

We have incorporated a number of accessibility features, detailed below, designed to support passengers using our service who are hearing or visually impaired. We have built these features into the Cruise mobile application ("app") (available on passengers' personal devices), the in-vehicle passenger experience, and the manner and means by which passengers can communicate with Cruise Customer Support.

[7] *See* D.20-11-046 at p. 36.

Passengers in our Driverless Deployment Program are able to hail a Cruise AV through a mobile app that is compatible with iOS VoiceOver. iOS Voiceover provides blind and low vision users with auditory feedback. When passengers request a Cruise AV, the mobile app provides an estimated wait time. Passengers who use iOS Voiceover are able to receive this information audibly and are able to anticipate the AV's arrival even if they cannot visually track its movements in the mobile app.

Once the Cruise AV arrives, passengers are able to locate their respective AV through the mobile app's audio-based navigation systems. Passengers also have the ability to have the Cruise AV honk and/or extend wait time for additional wayfinding support. This feature benefits all passengers. It also is particularly helpful for blind and low vision users based on our learnings from users and engagement with leading local, state, and national organizations. In addition, because we learned in user studies that blind and low vision passengers often prefer using their mobile phones with iOS VoiceOver rather than less familiar interfaces, like hard buttons or in-vehicle touchscreens, passengers are able to start rides and end rides through the mobile app (in addition to using the in-vehicle touchscreens to start rides and the tactile button to end rides, as shown below).

Figure 1: In-vehicle tactile communications buttons (provided as example, actual may vary)

Once passengers begin their ride, they are able to use both in-vehicle visual and audio-based features to receive updates on their ride. Each Cruise AV has two in-vehicle touchscreens in the back of the vehicle that are accessible to passengers. These in-vehicle touchscreens have a map navigation feature that passengers can use to monitor ride progress. This visual map navigation helps support deaf and hard of hearing passengers to monitor progress to their destination. Likewise, audible alerts provide blind and low vision passengers real-time updates about their ride, such as an audible alert when the ride has ended.

The Cruise AV has a two-way voice communications link accessible through a communications button ("two-way communications link" or "communications button") with a tactile feature designed to support blind and low vision passengers. Passengers can contact Customer Support through the in-vehicle communications button. Passengers who are deaf or hard of hearing can also contact Customer Support through the mobile app, which provides an integrated Real Time Text (RTT) feature.

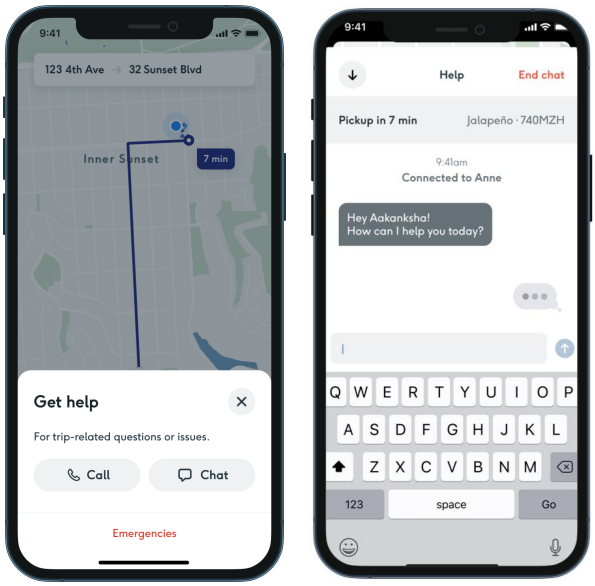

Figure 2: In-app customer support (provided as example, actual may vary)

Cruise is committed to continuing to engage with organizations and advocates from across the disability community to build on our research and user testing. To ensure we are collecting information from a broad range of stakeholders, we have created a feedback system, discussed in Section 5.4, that allows us to collect, investigate, and respond to any passenger comments and complaints and help us improve our service. As our technology matures, we will continue to evolve our accessibility features.

2.3.2. Wheelchair Accessible Vehicles ("WAVs")

Cruise provides passenger service in the Cruise AV, a fully-integrated self-driving car built upon the all-electric Chevrolet Bolt, a vehicle platform with a five-star safety rating in the National Highway Traffic Safety Administration's New Car Assessment Program ("NCAP").[8] The Cruise AV can securely fit a foldable wheelchair on the rear floor or backseat with one passenger. The rear floor and backseat can also accommodate similar sized foldable walkers and foldable scooters, in addition to other smaller assistive devices such as crutches and canes.

Ultimately, Cruise will provide rides in our purpose-built vehicle, the Origin, that is specifically designed for our autonomous ride-hailing service. Cruise is developing a wheelchair accessible version of the Origin.[9] To ensure compatibility with the specific needs of wheelchair users, we have

[8] *See* Press Release, National Highway Traffic Safety Administration, National Highway Traffic Safety Administration issues statement about New Car Assessment Program's highest rating (Oct. 9, 2018), https://www.nhtsa.gov/press-releases/national-highway-traffic-safety-administration-issues-statement-about-new-car. Vehicle safety ratings are available on the National Highway Traffic Safety Administration's website at https://www.nhtsa.gov/ratings.

[9] *See* Sam Abuelsamid, *Cruise CEO Shows Off Locker Module and Wheelchair Accessible Origin Robotaxi*, Forbes (Oct. 6, 2021, 4:58 PM),

been conducting targeted user research and are working closely with disability organizations such as the United Spinal Association and We Will Ride. Early prototypes have been reviewed in-person with wheelchair users, among others, showcasing the space provided to maneuver inside the cabin and highlighting the ability to accommodate the variety of wheelchairs (both motorized and manual) that users utilize.

Figure 3: Rendering of wheelchair accessible version of Origin (provided as example; actual may vary)

3. COVID-19 Response Plan for Ride-Hail Services

As of June 15, 2021, California Governor Gavin Newsom lifted the executive orders issued to address the pandemic, including termination of the Stay-at-Home Order and the Blueprint for a Safer Economy, to allow California to move forward with reopening fully and safely.[10] Therefore, the requirements of CPUC Resolution TL-19131, including a COVID-19 Response Plan, are suspended.

https://www.forbes.com/sites/samabuelsamid/2021/10/06/cruise-ceo-shows-off-locker-module-and-wheelchair-accessible-origin-robotaxi/?sh=26a725be1c78.

[10] *See* Exec. Order N-07-21, Exec. Dep't State of California (Jun. 11, 2021), https://www.gov.ca.gov/wp-content/uploads/2021/06/6.11.21-EO-N-07-21-signed.pdf.

4. Passenger Education

4.1. Passenger Onboarding and Education

The Cruise AV is a fully-integrated self-driving car built upon the award-winning, all-electric Chevrolet Bolt, but with a signature difference: a suite of components customized for self-driving. Some of these components are immediately visible to passengers, while others are not, but all ensure optimal safety. For instance, an array of highly visible external sensors that enable the Cruise AV to gather information about its environment and inform the system's driving decisions are immediately apparent to most passengers and passersby. Conversely, the computer that comprises the "brain" of the self-driving system is contained in the trunk of the AV and is not visible to passengers or passersby. Regardless of visibility, the diversity of these components are the basis for how the Cruise AV perceives, operates, and makes decisions.

Many passengers will experience a fully driverless ride for the first time when they participate in Cruise's Driverless Deployment Program. We are invested in making sure that every ride is safe and easy-to-understand for passengers from the start. Prior to initiating a ride, passengers have access to educational onboarding materials through many communication channels, including the in-vehicle touchscreens, mobile app, website[11], and email, that will address ride safety. These onboarding materials help passengers understand what to expect during their ride, including available support options and how to use them. Cruise also developed a Support Center that is available in the mobile app and on Cruise's website.[12] The Cruise Support Center allows passengers to easily access information on how to ride, the AV technology, accessibility, trip issues, emergencies, and Cruise Support. The following sections discuss the types of educational materials, with illustrative images, that passengers will receive.

[11] *See* Cruise, Safety, https://getcruise.com/safety/.
[12] *See* Cruise, Support, https://getcruise.com/support/.

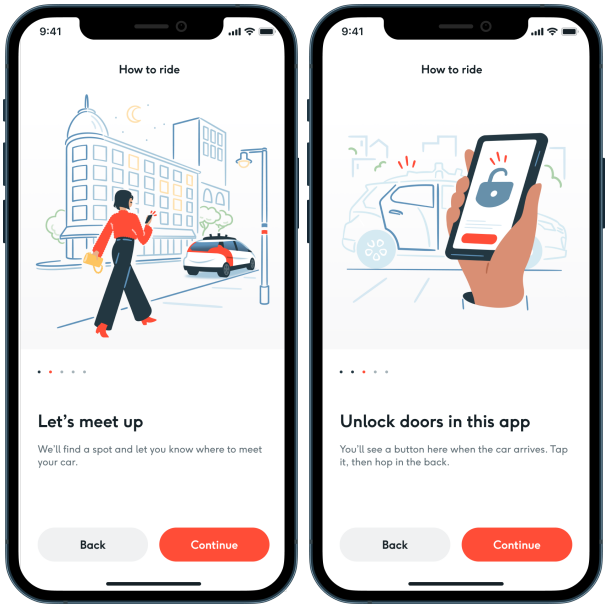

Figure 4: In-app onboarding (provided as example; actual may vary)

Cruise also has designed a passenger experience with in-vehicle contextual cues that provide guidance, in real-time, about what is happening during the ride and expectations for passengers. As detailed in Section 4.3, these contextual cues include guidance that ranges from buckling seat belts to closing doors before the ride begins. These cues make rides more safe, accessible, and intuitive for passengers.

4.2. Understanding Cruise's Autonomous Vehicle Technology

Before taking a ride, Cruise provides passengers with onboarding materials that explain the technical basics of how our AVs safely navigate San Francisco.

For example, to contextualize the experience, passengers will learn how the Cruise AV is engineered to operate safely on its own — with no human driver. Passengers will learn that they should not assume, nor will they be asked to assume, the role of a driver or take operational control of the Cruise AV at any point during a ride. The onboarding materials also make clear that passengers will remain passengers at all times and are not responsible for the Cruise AV's operations in any capacity. Further, passengers will be educated on how Cruise's self-driving system works by rapidly synthesizing information collected by the sensors to inform driving behavior through perception (understanding the environment), prediction and planning (evaluating possible safe paths or trajectories for the vehicle given the environment), and controls (the driving maneuver). These learnings are important to educate passengers who have not yet been exposed to self-driving technology and enable them to have a more integrated and informed understanding of what a ride might entail. Passengers can also access information at any time through the Support Center available in the mobile app and on the website.[13]

[13] *See* Cruise, Cruise Support, https://getcruise.com/support.

Prior to taking their first ride, passengers are made aware that they are being offered driverless autonomous service and will need to provide affirmative consent to receive such service by affirmatively accepting the Customer Agreement in the mobile app, as illustrated below in Figure 5.[14]

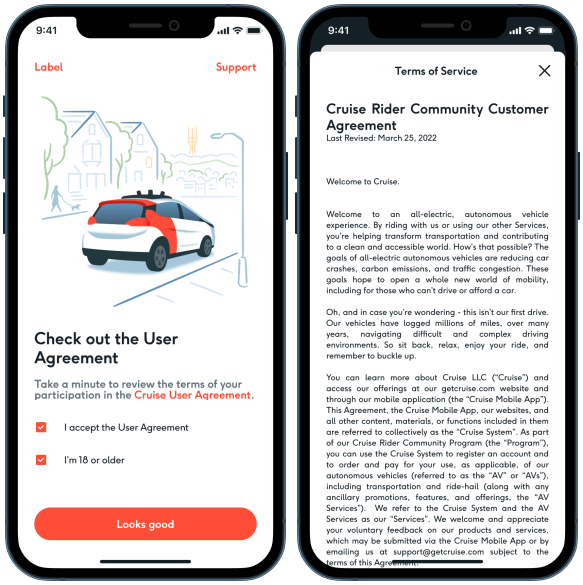

Figure 5: Customer Agreement acceptance flow for driverless ride-hail service (provided as example; actual may vary)

4.3. The Passenger Experience and Safety

Prior to their first ride, passengers will gain access to the Cruise mobile app. The Cruise mobile app will guide passengers on how to properly hail, identify, confirm, and enter the Cruise AV.

[14] *See also Cruise, Cruise Terms of Service,* https://getcruise.com/legal/us/terms.

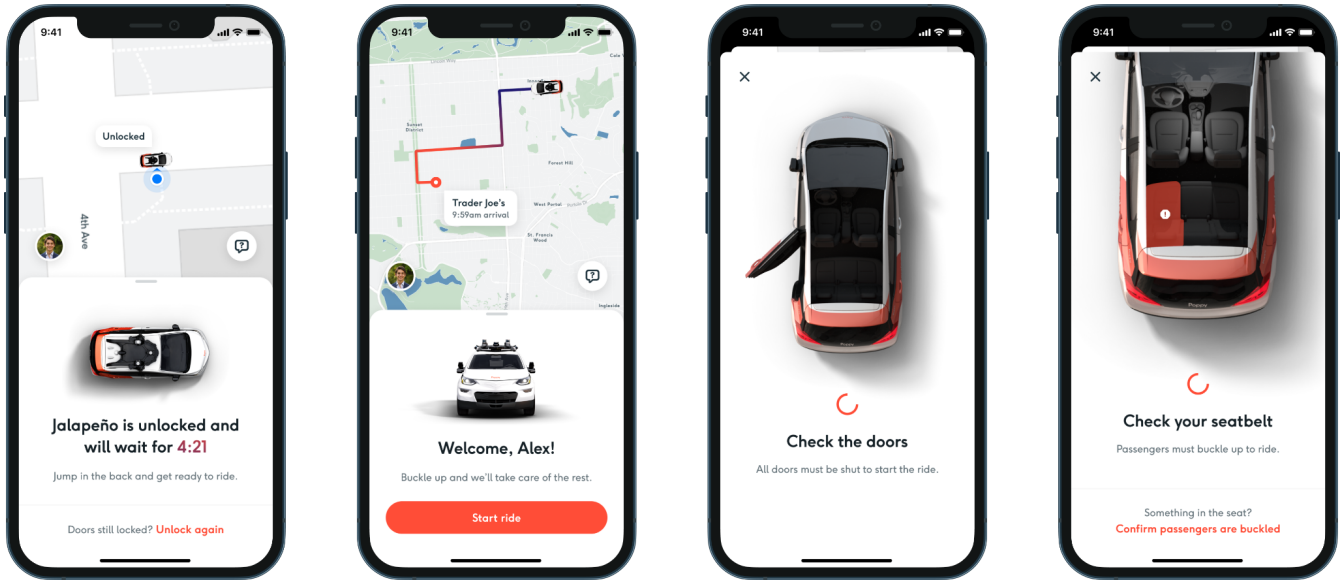

Figure 6: In-app contextual cues (provided as example; actual may vary)

To ensure safety while onboarding the Cruise AV and during the ride, in-vehicle contextual cues help passengers understand what is happening after requesting a ride and throughout the ride. For example, the mobile app and in-vehicle touchscreens display to passengers the route and estimated time of arrival, reminders to check doors and buckle seat belts. The in-vehicle touchscreens will also display safety rules to passengers during their first ride, as illustrated in Figures 7-9 below, and guidance on how to safely exit the vehicle upon arriving at their destination with consideration for other road users.

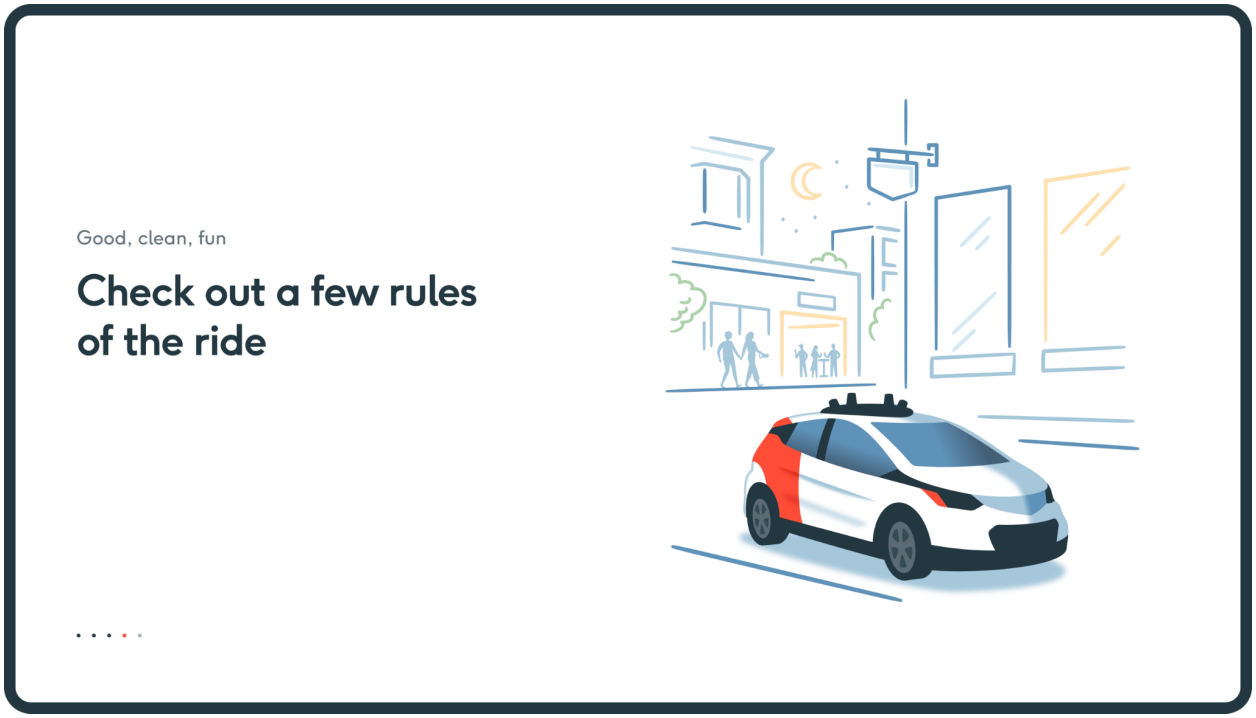

Figure 7: In-vehicle safety reminder (provided as example; actual may vary)

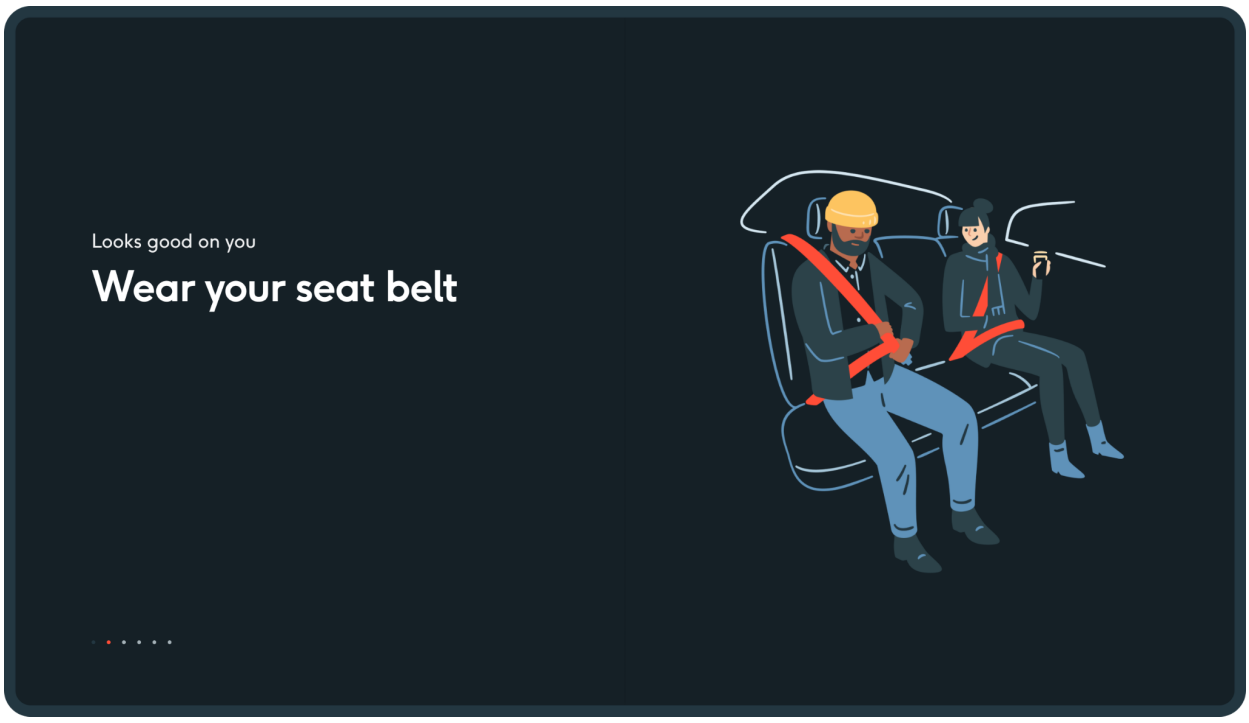

Figure 8: In-vehicle safety reminder; seat belt (provided as example; actual may vary)

Figure 9: In-vehicle safety reminder; hands and arms (provided as example; actual may vary)

At any time during the ride, passengers can contact Customer Support by pressing the in-vehicle communications button in the Cruise AV (see Figure 10 below) or through the mobile app using its phone support or, through the accessibility setting, RTT function.

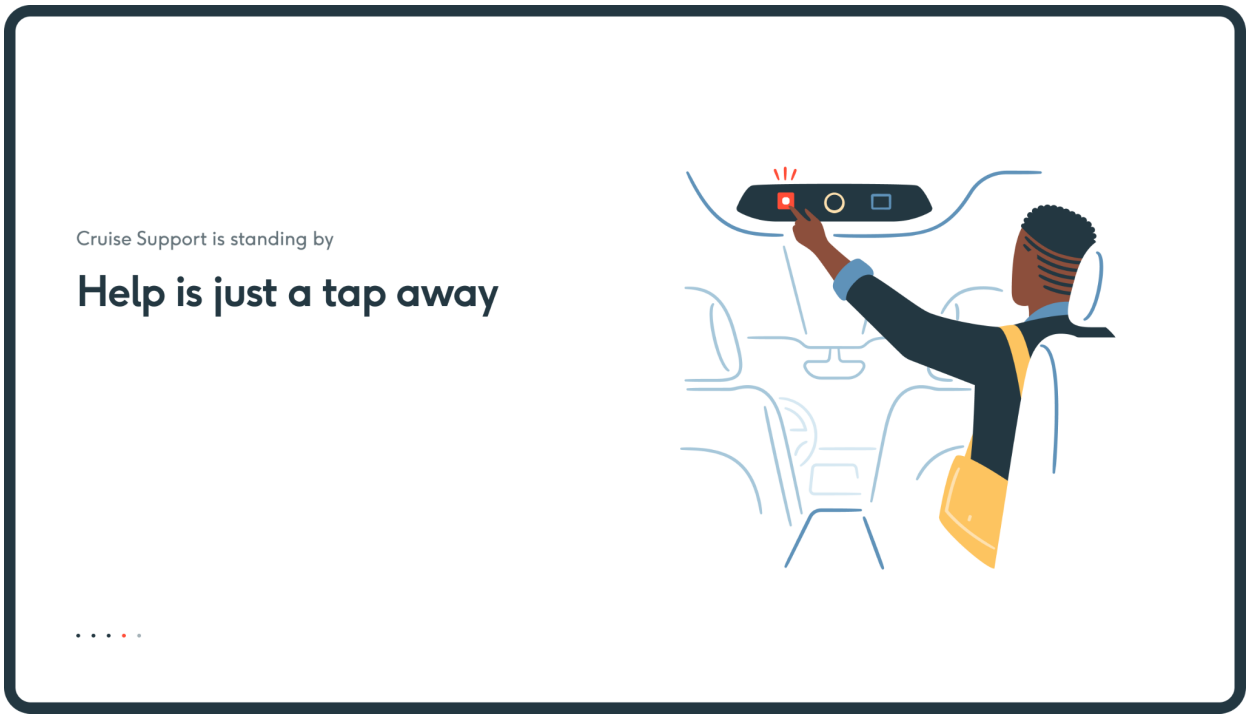

Figure 10: In-vehicle Customer Support reminder (provided as example; actual may vary)

In addition, passengers may send a written message to Customer Support through the mobile app at any time before, after, or during the ride.

Cruise also provides passengers with helpful reminders to guide them on how to complete their ride. We have intentionally designed these reminders to be easy-to-understand for passengers to increase their comfort and awareness of how to engage with a driverless vehicle. For example, prior to pickup, Cruise sends passengers a reminder to unlock the doors using the mobile app on their phone. In addition, if passengers were to start the ride without buckling their seat belts or closing doors, Cruise provides an audible and visual alert on the in-vehicle touchscreens to passengers to close the doors and buckle up.

During the ride or before the passenger exits after the Cruise AV has reached its destination, a passenger is able to change their destination using the mobile app. As illustrated in Figure 11 below, passengers can tap an “Edit” button and can type in a new destination to make this change.

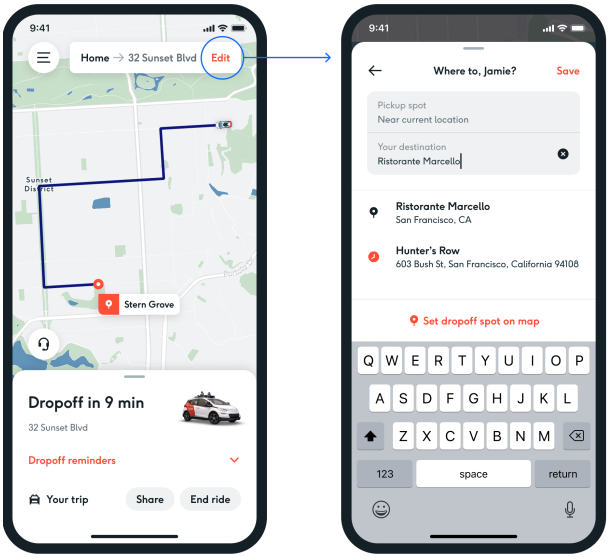

Figure 11: Change destination feature (provided as example; actual may vary)

If a passenger feels the need, they are able to request to end the ride prior to reaching their destination using an in-vehicle button or through the mobile app.

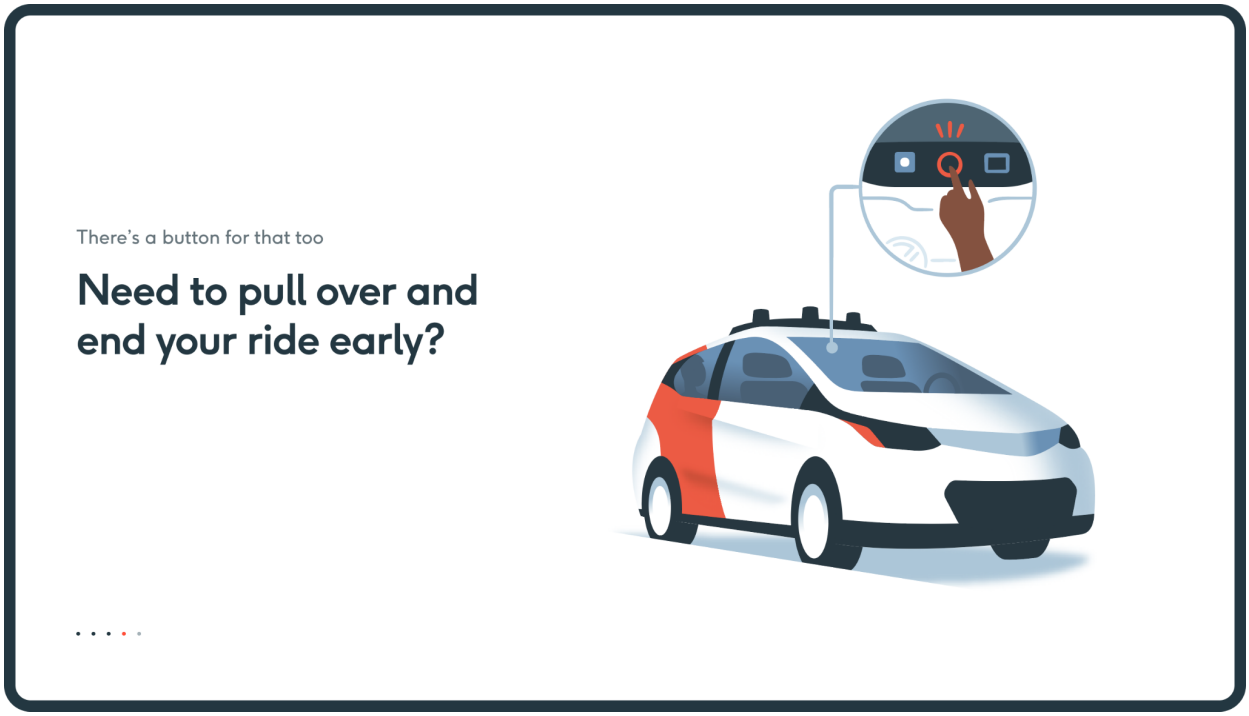

Figure 12: In-vehicle end ride early messaging (provided as example; actual may vary)

If the Cruise AV encounters a roadblock, such as an unexpected street closure, or is otherwise directed by law enforcement personnel to avoid a particular area, the Cruise AV will adjust its route, and Cruise will inform the passenger of any changes to the route through the in-vehicle touchscreens. If the Cruise AV is unable to continue the ride at any time, Customer Support will automatically initiate a call to the passenger. Passengers can also initiate a call with Customer Support at any time during a ride through the in-vehicle, two-way communications button or via the mobile app using its phone support.

Finally, passengers receive an audible notification and a notification on the in-vehicle touchscreens that the ride has ended. There are also audible and visual reminders to remind the passenger to exit safely.

One of Cruise's foundational pillars is to provide excellent passenger service from day one of our service. As with any service, we want to learn and improve our service over time. As such, Cruise has developed an efficient, in-app feedback system to ensure we are integrating passenger feedback and experiences to improve our service. For example, passengers provide structured feedback, such as a ride rating after every ride, as depicted in Figure 22 in Section 5.4 below.

4.4. Passenger Safe Ingress and Egress

Each Cruise AV is distinguished by orange branding and the Cruise emblem visible on the exterior of the vehicle. Each vehicle has a unique vehicle name that is displayed on the front hood, rear hatch, the right and left rear quarter panels and in the in-vehicle touchscreens.

Figure 13: Cruise AV branding and unique vehicle name (provided as example; actual may vary)

After connecting to the Cruise AV through the Cruise mobile app, passengers are able to find their designated Cruise AV through a user interface in the mobile app that displays the precise location of the passenger's specific vehicle, the vehicle's name, and its estimated time of arrival. If there is insufficient space for the vehicle to stop at pick up, the Cruise AV will select a nearby area with adequate space to stop to pick up the passenger. The mobile app will convey this change to the passenger while they are waiting.

The Cruise AV name displayed in the mobile app should match the name on the vehicle assigned to each passenger for their ride. Passengers are able to confirm the name before entering the Cruise AV by looking for the name on the Cruise AV (as shown in the two images above). Passengers also are able to use the mobile app to call Customer Support to confirm the vehicle or receive audible way-finding cues to access the Cruise AV. Passengers can unlock their assigned vehicle only through the mobile app, which will prevent a passenger from entering the wrong vehicle and ensure the correct person enters the AV. If a passenger does not unlock the Cruise AV after it arrives, the Cruise AV will briefly unlock shortly before the AV departs. This will allow a passenger whose phone has stopped working or loses service to enter the Cruise AV. However, the passenger will be required to enter a verification code (the last four digits of the passenger's phone number) on the in-vehicle touchscreens after entering the vehicle to start the ride.

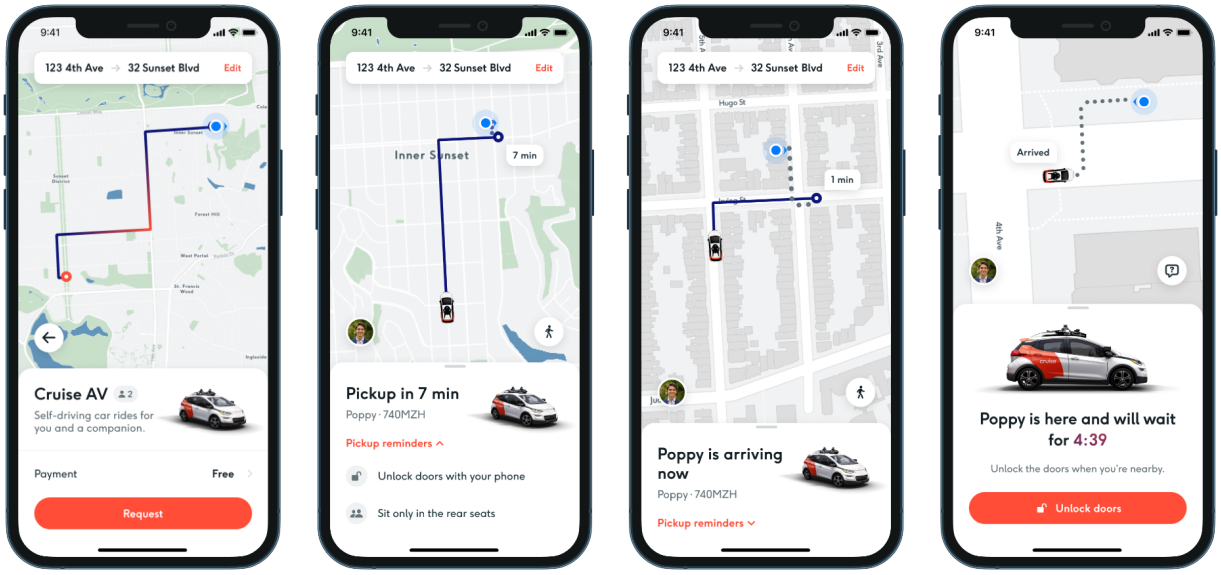

Figure 14: In-app ride-hailing experience (provided as example; actual may vary)

Once the Cruise AV arrives, only authorized passengers are able to start the ride through the mobile app or in-vehicle touchscreens. For the current phase of our service, passengers are able to ride only in the backseats. The Cruise AV front doors are locked by default. Passengers cannot unlock them. In the unlikely event a passenger is able to open the front car doors to enter the driver or front passenger seat, the Cruise AV will give an audio in-vehicle warning and a visual warning through the in-vehicle touchscreens (see Figure 15 below). In any such instance in which a passenger (or anyone else) is detected in the front seats, the ride will not start and the Cruise AV will not operate until a Remote Assistance Advisor (described below) authorizes the Cruise AV to continue. In addition, a label on the Cruise AV steering wheel warns against attempting interactions with the driver controls (e.g., steering wheel and pedals), and a physical barrier is in place to separate backseat passengers from driver controls in the front seat.

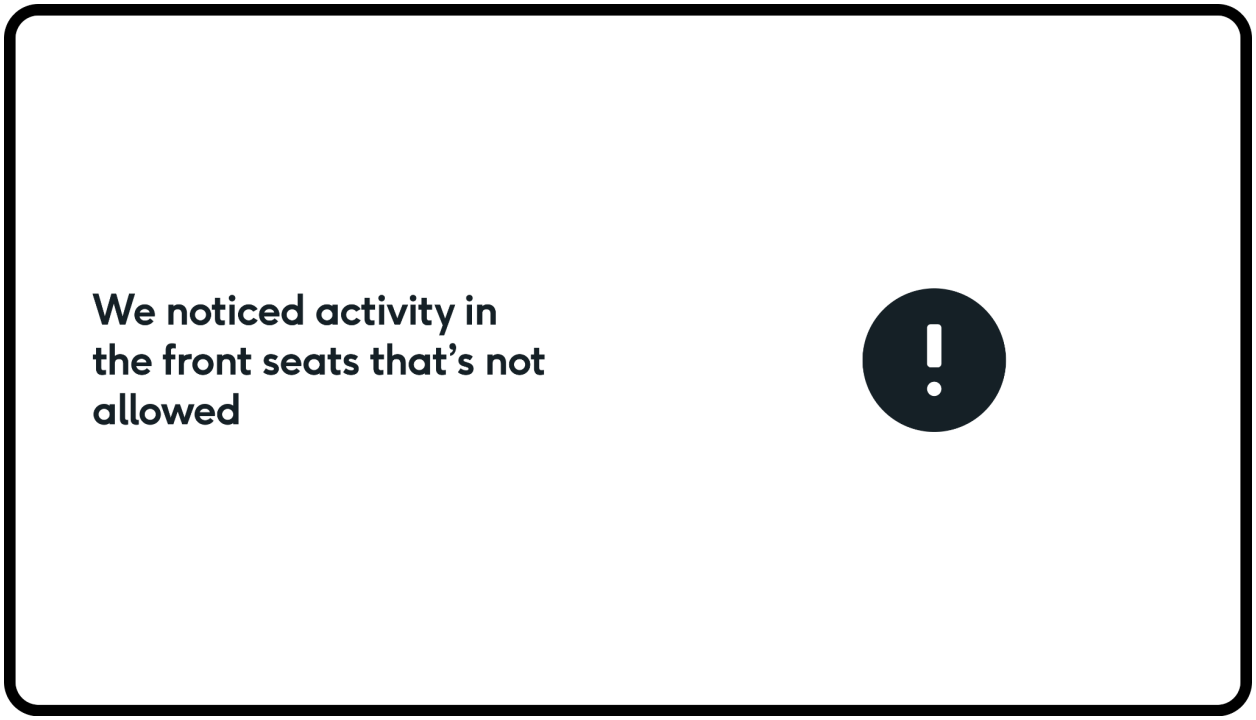

Figure 15: In-vehicle front seat activity notification (provided as example; actual may vary)

We also have automatic tamper detection mechanisms and fallback stopping maneuvers programmed in the event of any critical AV tampering. For example, these mechanisms include physical barriers between the front and rear seat and tamper protection covers and warning labels to dissuade passengers from accessing unauthorized interfaces. In the event a minor accompanies an adult passenger for a ride, such mechanisms are an additional safeguard to prevent them from tampering with AV controls. For example, if a passenger attempts to exit while the Cruise AV is still in motion, the Cruise AV will detect the vehicle door opening during a ride and respond by coming to an immediate, but controlled, stop to maximize passenger safety.

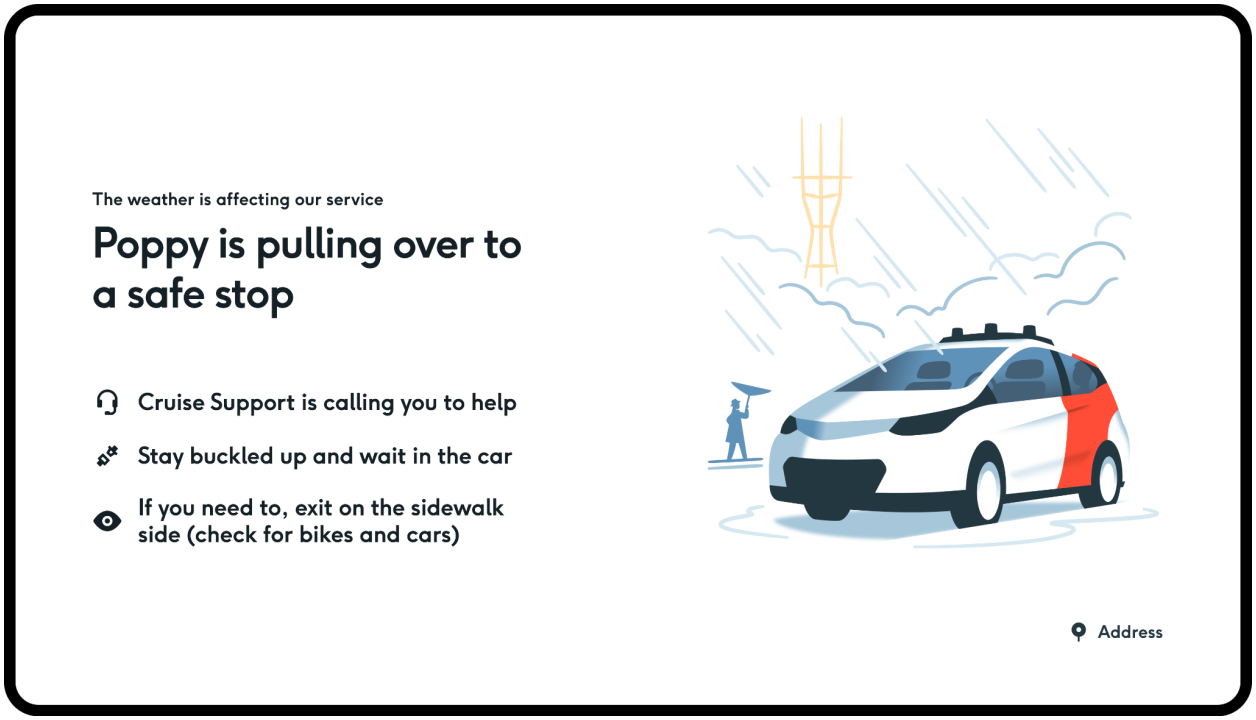

Figure 16: In-vehicle safe stop notification (provided as example; actual may vary)

4.5. Safe Arrival and Exiting

Passengers can select a pick-up location and destination when requesting a ride or change their destination during the ride in real time with the Cruise mobile app. Passengers can also contact Customer Support using the in-vehicle two-way communications button or the mobile app to change their destination during the ride. To determine the safest stopping location, the Cruise AV chooses a location that is closest to the passenger's requested pick-up location or destination, taking the following into consideration:

- The presence of pedestrians, cyclists, and other vehicles on the road
- Curb colors, marked parking spaces, and restrictions described by nearby signage
- Transit lanes, fire lanes, pedestrian safety zones, and other restricted lanes
- Road features such as intersections, crosswalks, bicycle lanes and driveways

Upon arriving at a pick-up and drop-off location, the Cruise AV first will look for available curb space to which it can pull over for passenger loading or unloading. The Cruise AV is designed to pull out of lane when there is an available legal pullover location to reduce the likelihood that the Cruise AV will be stopped in the lane of travel. In instances where the Cruise AV is not able to pull out of lane (i.e., if appropriate curb space is not available), the Cruise AV will double park, which it may do as a commercial vehicle under the California Vehicle Code, like other commercial vehicles, for the loading or unloading of passengers.[15] We are continuously improving the Cruise AV. The

[15] *See* California Vehicle Code section 22502(b)(1).

Cruise AV's capabilities and performance of maneuvering through traffic and in and out of travel lanes for pick-ups and drop-offs will continue to be improved, as we expand our ODD.
When the Cruise AV is approaching its destination, there is an audio in-vehicle reminder, a notification visible on the in-vehicle touchscreens and a notification in the mobile app informing the passenger of the end of the ride. The passenger is reminded to exit safely, with consideration for other road users (see Figure 17 below).

If the Cruise AV stops due to a problem and has not arrived at the passenger's destination (for example, if it stops due to a detected weather condition that prevents the Cruise AV from continuing), the Cruise AV will inform the passenger of the Cruise AV's status, as depicted in Figure 16 above. Customer Support also will automatically connect to the passenger through the two-way communications button to assist the passenger on next steps, as further described below in Section 5.

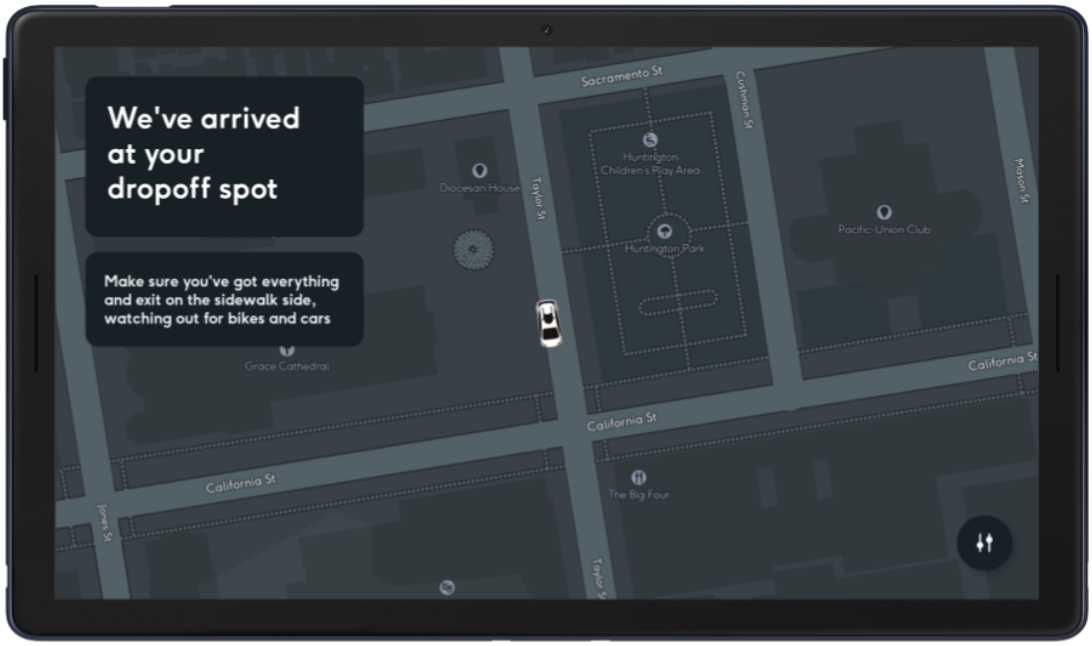

Figure 17: In-vehicle end-of-ride notification (provided as example; actual may vary)

In the event a passenger arrives at their final destination and there is an external threat, such as a hostile individual or some other safety hazard, the passenger has the option to not exit the vehicle immediately. The passenger can contact Customer Support and request that the doors of the Cruise AV remain locked or change their destination with Customer Support, or through the mobile app, to avoid the safety concern in their immediate vicinity.

4.6. Minimizing Safety Risks to Passengers

4.6.1. Minimal Risk Condition

The Cruise AV meets 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*.[16] The Cruise AV's self-driving system is designed to perform the entire dynamic driving task within a defined ODD and has the capability to achieve a Minimal Risk Condition (MRC)[17] without any expectation that a human driver will intervene. If a Cruise AV is in a situation where it has exited its ODD or experiences a system failure, by design, the Cruise AV will achieve a MRC at a safe location.

Sophisticated diagnostics are integrated into the Cruise AV's hardware and software systems that will initiate the appropriate dynamic driving task to bring the vehicle safely to a MRC in the event of any single or multi-point failure in any hardware or software system. Additionally, the Cruise AV has redundant hardware and software systems that support the safe execution of achieving a MRC in the presence of a system failure.

The maneuver performed to achieve a MRC depends on residual AV performance and urgency of the response. The current range of potential maneuvers includes a pullover at the nearest available safe stopping location and a controlled stop in lane The range of potential maneuvers will expand over time. The Cruise AV will avoid pulling over in front of certain spots, such as fire stations or ambulance loading areas. In most MRC scenarios, the Cruise AV will prioritize moving out of high risk areas, such as intersections, before it achieves a MRC. The Cruise AV will always activate hazard lights once a MRC is achieved.

4.6.2. Operational Design Domain and Avoidance Areas

Cruise's ODD will be the ODD set forth in Cruise's Expansion Amendment to its DMV Deployment permit, which expands Cruise's operations to the full 7x7 San Francisco: 24 hours a day, 7 days a week.[18] The Cruise AV will operate at a maximum speed of 35 miles per hour on local and arterial roads. Certain roadway types will be excluded, such as bridges, tunnels, overpasses, and underpasses.[19]

Currently, Cruise does not operate driverless passenger service in heavy rain or heavy fog, however, we continue to improve our technology in these conditions. In addition, Cruise may further restrict its driverless operations to evaluate various aspects of its system.

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[16] *See* SAE International, Taxonomy and Definitions for Terms Related to Driving Automation Systems for On-Road Motor Vehicles, J3016_202104 (Apr. 30, 2021), https://www.sae.org/standards/content/j3016_202104/.
[17] An MRC is a low-risk operating condition that an autonomous vehicle automatically resorts to when either the automated driving system fails or when the human driver fails to respond appropriately to a request to take over the dynamic driving task. *See* Cal. Code Regs. tit. 13, § 227.02(i).
[18] Cruise's ODD is subject to change pursuant to DMV regulations, including section 228.10 of Title 13 of the California Code of Regulations.
[19] *See* Section 8.1.

For example, Cruise may opt to limit its driverless operations during:

- Certain environmental conditions
- Certain times of day
- Certain routes

Cruise can dynamically respond to conditions in the ODD, such as parades or roadway closures due to emergency scenarios. Cruise responds to these situations through automated AV detection systems and operational restrictions until the situation ends. The benefit of a 24/7 fleet-managed system is that if one Cruise AV experiences a temporary or new roadway closure or issue, Cruise can transmit the information to the entire fleet to ensure that area is avoided.

4.6.3. Transit and Rail Safety

The Cruise AV is designed to operate at crossings with cable cars, streetcars, or light rail vehicles when doing so is necessary to travel through at-grade intersections designed to be used by motor vehicles, and controlled by stop signs or traffic signals. The Cruise AV detects and tracks crossing public transportation vehicles through lidar, radar, and camera signals. The Cruise AV is designed to yield, stop, or proceed over the track area according to the applicable right-of-way by following the stop sign or traffic signal directive. The Cruise AV is also designed to stop for red lights and stop signals, and yield the right-of-way to crossing traffic as necessary. The Cruise AV is designed to avoid blocking crossing traffic that has the right of way by maintaining a distance from the intersection. Furthermore, the Cruise AV is designed to not travel across passive crossings, which are intersections where the public transportation vehicle's direction of travel does not have a stop sign or traffic signal device to define when it should yield and the public transportation vehicle has the right-of-way. The Cruise AV is designed to not travel across rail crossings that contain gate arms, flashing lights, audible alarms, or signage stating that rail traffic has the right-of-way. Cruise is continuously improving the Cruise AV's capabilities in maneuvering near transit and rail vehicles.

In addition to minimizing safety risks through the AV design and ODD, Cruise also has developed robust Customer Support and Incident Response functions to minimize safety risks to passengers. Those functions are discussed below.

4.6.4. Passenger Health Issues

If a passenger is alert and experiencing a health issue, the passenger can contact Customer Support either through the mobile app or the two-way communications button described in Section 5.2. Depending on the severity of the health issue, the passenger can request that the Cruise AV pull over at the nearest safe location, change the Cruise AV's destination to a medical provider, or request the dispatch of first responders to the Cruise AV.

If a passenger is unable to proactively alert Cruise regarding a health issue (e.g. heart attack, cognitive inability, intoxication), Cruise has implemented safeguards to assist the passenger in such situations. In situations where a passenger does not press the "Start" ride button after entering the Cruise AV, presses the two-way communications button but fails to respond to Customer Support, or does not exit the Cruise AV in a timely manner at the end of the ride, Cruise will follow an

escalation protocol. In these scenarios, Customer Support first will attempt to communicate with the passenger. Customer Support also has the capability to initiate a live stream video of the inside of the Cruise AV. If the passenger is unresponsive, Customer Support will escalate the issue adding our Remote Assistance team and OnStar. An Onstar Advisor will attempt to engage with the passenger and dispatch first responders if needed while Customer Support requests Field Support to be dispatched to the Cruise AV. Throughout the escalation, the two-way communication link will always remain active between Cruise and the passenger.

4.6.5. Share My Ride

Passengers can choose to share their trip details with family and friends via the Share My Ride in app feature, as depicted in Figure 18 below. Cruise will pre-populate a message for the rider to send via the messaging tool of their choice (e.g., WhatsApp, SMS, etc). The message will contain a link that allows the recipient to view the rider's trip progress in a webview.

The webview expires two hours after the trip ends, and provides the following information about the passenger's trip:

- Rider name
- Trip status
- AV map location
- Destination address
- Cruise AV name
- Cruise AV VIN
- Estimated Time of Arrival
- Pick-up time
- Drop Off time

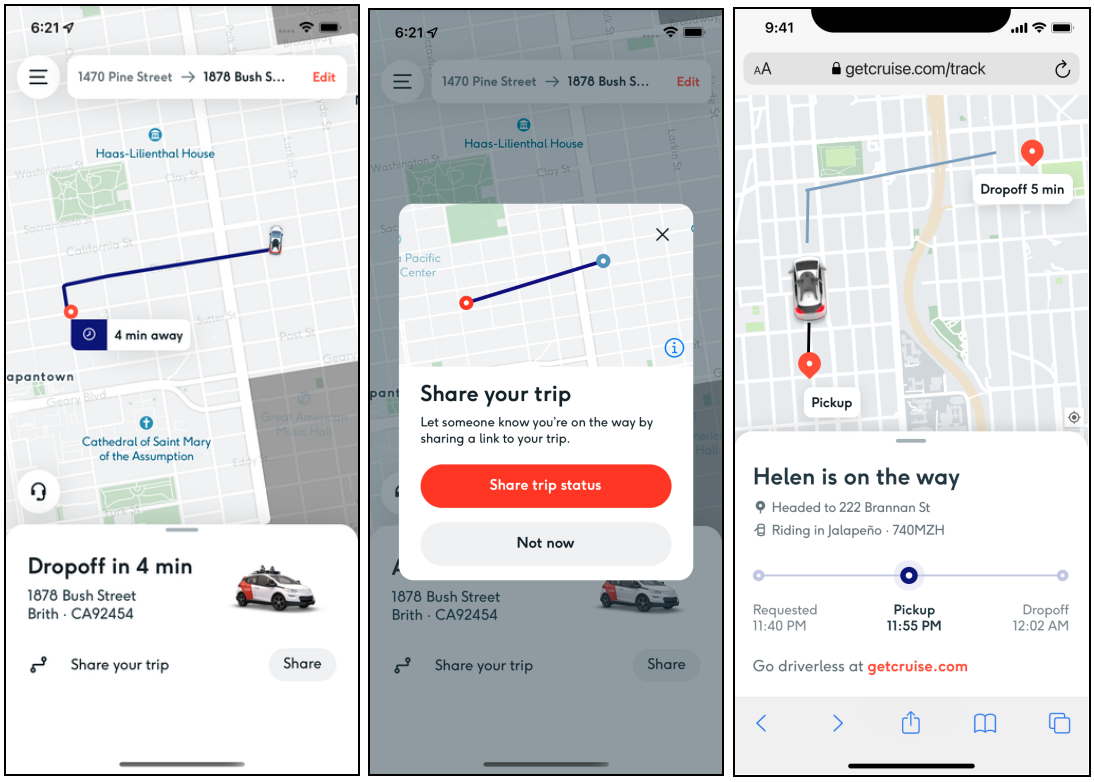

Figure 18: Share my ride feature (provided as example; actual may vary)

5. Contacting Cruise

5.1. Response Times to Passenger Requests

During the ride, as discussed earlier, passengers will have multiple ways to contact Cruise based on their individual preference. Cruise has teams available to assist passengers 24/7 through the two-way communications button inside the vehicle or through the mobile app on their personal devices. Passengers can expect their requests during a ride to be handled immediately. In addition, the Cruise AV is equipped with OnStar functionality, which includes Automatic Crash Response for severe collisions. For more than twenty years, OnStar has offered peace of mind for any emergency that may arise. As discussed below in Section 5.5, in the event of an emergency, Cruise and OnStar teams trained in incident response are available within seconds and can contact public safety and first responders as needed.

A passenger can provide post-ride feedback, questions, or concerns to Cruise through the mobile app for an associated ride or offer broader written feedback. Passengers who are not yet mobile app users can also reach out to Cruise through email at support@getcruise.com. Passengers should expect an immediate response to feedback delivered through phone call during the course of a ride. For post-ride feedback delivered through email or the mobile app, passengers should expect a response within twenty-four hours. As our passenger service grows, we intend to maintain the same response turnaround times through appropriate staffing.

5.2. Passenger Contact and Communications

Cruise Ride Communications: As discussed above and further below, Cruise will communicate with passengers throughout their ride through in-vehicle audio communications, in-vehicle touchscreens, and the mobile app on passengers' personal devices, providing safety notifications and ride updates.

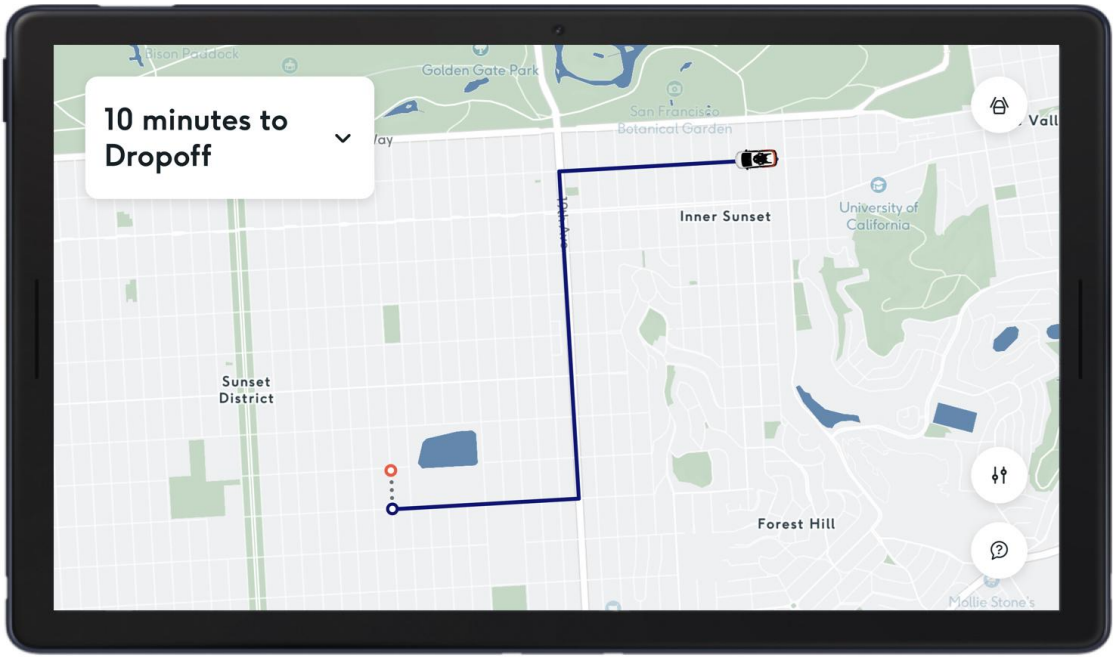

Figure 19: In-vehicle ride progress tracking (provided as example; actual may vary)

In-Vehicle Two-Way Communications Link: Each Cruise AV is equipped with a two-way audio communications link inside the vehicle through a clearly marked button above the passenger seats. Cruise's response time from the two-way communications link is immediate.

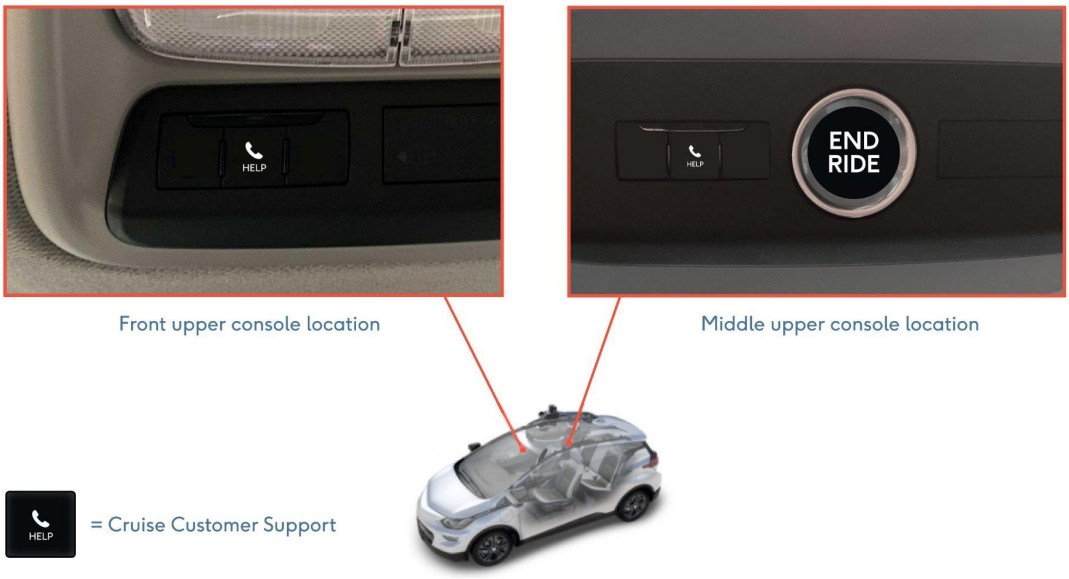

Figure 20: In-vehicle two-way communications buttons (provided as example; actual may vary)

In-App Customer Support: Passengers can initiate a voice call to Customer Support by pressing the in-vehicle communications button or calling directly through the mobile app on their personal devices. Customer Support triages calls and can escalate high severity incidents to the Remote Assistance team. Passengers can also send a written message to Customer Support through the mobile app and Cruise will respond within twenty-four hours.

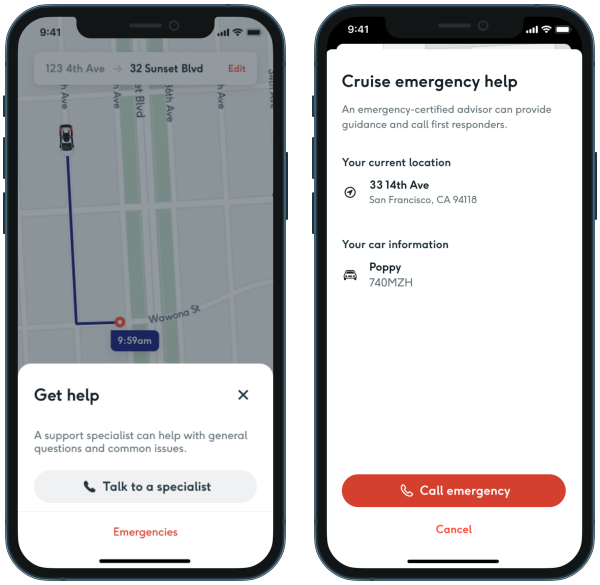

Figure 21: In-app customer support and emergency help (provided as example; actual may vary)

Cruise is alerted to potential incidents by both automated and human review processes monitoring the vehicle at all times. For example, in the event of a collision, unwanted public interaction, or law enforcement traffic stop, Cruise will respond promptly whether or not the passenger initiates a call through the two-way communications link or their personal devices. In addition, Cruise's Remote Assistance team monitors and reviews every active detected incident.

If a passenger contacts Customer Support regarding a lost item, Cruise will summon the Cruise AV to its facilities, retrieve the item, and place it in a secure location. Cruise will then communicate to the passenger regarding the place and time where the passenger can retrieve the lost item. We are building towards being able to send the Cruise AV back to the passenger's drop-off location so they can directly retrieve any items left in the vehicle.

5.3. Accessible Customer Support

As discussed above, passengers will receive onboarding materials that explain how to use the in-vehicle button that provides a two-way communications link to Customer Support. The two-way communications link is accessed through a clearly marked, tactile button that is designed for use by blind and low vision passengers. Passengers also will be able to access Customer Support through the mobile app on their personal devices.

An integrated RTT feature is available through the mobile app to provide accessible support to deaf and hard of hearing passengers.

Based on its research in partnership with the disability community, Cruise has learned that passengers value customization. For example, Cruise has heard repeatedly from blind and low vision individuals that their phone is their device of greatest comfort. As a result, customer support settings in Cruise's mobile app include preferences for support. Cruise also intends to use insights and feedback from passengers to continue improving user experience and confirm which options are the preferred modes of communication.

5.4. Feedback

Feedback is extremely important to our company at all times of our development, and even more so during our early stage of passenger operations. Cruise has collected and will continue to collect passenger and general public feedback through our support channels and in-app feedback requests after each ride. The support channels through which passengers can contact Cruise are discussed above. Other road users and the general public can submit comments or complaints to Cruise by emailing community@getcruise.com.

We currently classify comments and complaints into the following general categories: mobile app (e.g., software and app errors); pricing (e.g., incorrect or unclear price); pickup (e.g., wait time, location, identification issues, safety and accessibility); route (e.g., long or changed route); driving (e.g., too cautious or jerky maneuvers); in-vehicle touchscreens and audio (e.g., issues relating to announcements, visual displays or accessibility); drop off (e.g., location, arrival time and safety); cleanliness (e.g., trash or odor); and customer support (e.g., unhelpful or slow response). A

comment or complaint may track across multiple categories. For example, a comment about an accessibility feature may relate to both the mobile app and a pickup experience. We have chosen this taxonomy because it allows us to monitor the frequency and types of comments that are most likely to arise in the context of ride-hailing and continuously enhance the passenger experience, and we will adjust the taxonomy over time as we identify adjustments that help us to better meet those goals. When we receive complaints, we escalate concerns to the relevant internal teams responsible for the associated Cruise AV behavior or product feature, take action to remediate any identified issues, and track resolution of such issues. In addition to these structured feedback categories, passengers are able to submit free-text feedback on their ride experience. Cruise reviews these responses to discern further, or more nuanced, opportunities for product improvement.

If passengers provide information or feedback by sending a message to Customer Support from the mobile app, Cruise will respond within twenty-four hours. Information is retained for a period of three years in compliance with General Order 157-E. Recorded communications during the ride from the passenger in the vehicle with Customer Support and OnStar Emergency Response[20] will be retained for a period of one year.[21]

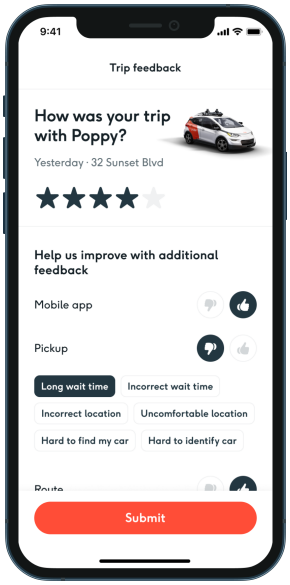

Figure 22: In-app passenger feedback collection (provided as example; actual may vary)

[20] Customer Support and OnStar Emergency Response are the only teams that remotely communicate with Cruise passengers and fulfill the role of a "remote operator" for purposes of the CPUC's requirement that each AV permit-holder "[r]ecord 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." *See* D. 20-11-046, at Ordering Paragraph 7(l).

[21] *See* D.20-11-046, at Ordering Paragraph 7(l). The confidentiality of the recordings will be governed by General Order 66-D. *Id.*

5.5. Cruise Teams Supporting Passenger Safety

Teams across Cruise work together closely so that passengers are safe, supported, and protected should any circumstance interfere with their ride or if they have any questions along the way. Cruise has more options available to support passengers than they may have experienced in traditional ride-hailing.

Cruise's robust passenger support operation consists of five teams dedicated to ensuring the safety, health, wellbeing, and comfort of our passengers:

- Remote Assistance: Supports the Cruise AV when it needs help as further described below. Remote Assistance does not interact with passengers directly, nor does Remote Assistance perform dynamic driving tasks. However, specially trained Remote Assistance experts manage and triage various situations and assist the Cruise AV to navigate through particularly challenging situations.[22]
- Customer Support: Interacts with the passenger through two-way communications link, in-app messaging, phone, and email; assesses potential emergencies and escalates by adding OnStar or Remote Assistance during live support interactions when necessary.
- Trust & Safety: Works with Customer Support on incident response and conducts investigations into passenger community safety concerns to help determine appropriate courses of action.
- OnStar Emergency Response: Dispatches first responders to the scene when there is an emergency requiring police or medical help.
- Field Support: Serves as the on-scene response unit to provide direct, in-person support to passengers or to interact with third parties and public safety officials when necessary.

Although not all teams interact with passengers directly, they all play a crucial support role in ensuring the highest level of passenger safety. All of Cruise's teams supporting passenger safety undergo rigorous, specialized training and continued education for their specific functions and roles. Below is a more detailed description of the function of each of these five teams.

5.5.1. General Support for Cruise Passengers

Remote Assistance: Remote Assistance is a team of Remote Assistance Advisors that do not communicate with passengers or perform dynamic driving tasks. Rather, Remote Assistance continuously and proactively monitors a queue that Cruise AVs join if they are in need of assistance. Remote Assistance Advisors also have access to an interface to monitor video feeds from the Cruise AV's externally-facing cameras and the Cruise AV's lidar map. If the Cruise AV is unable to navigate the environment independently due to unforeseen circumstances (e.g., road blockages), within a matter of seconds, the Cruise AV initiates a call to Remote Assistance and is automatically matched with a Remote Assistance Advisor. The Remote Assistance Advisor assists the Cruise AV in determining how to proceed. The Remote Assistance Advisor can see what the

[22] Cruise previously had a separate "Incident Expert" team, which has been consolidated under Remote Assistance.

Cruise AV sees and can help confirm the Cruise AV's classification of the object and/or assist the Cruise AV to navigate around the unexpected situation.

Within Remote Assistance, a group of specially trained experts remotely manage and triage various situations. These experts view the state and location of the Cruise AV. When necessary, they can change the autonomous state of the vehicle or direct the vehicle with navigation, such as instructing the vehicle to pull over to the side of the road. Similar to Customer Support, these experts may also control Cruise AV in-vehicle cabin settings like locking and unlocking doors, rolling down windows, honking the horn, or turning on hazard lights. If a passenger first reports an emergency to Customer Support, then a Customer Support Advisor escalates to Remote Assistance as needed. In some cases of a confirmed collision, a Remote Assistance Advisor will conference in OnStar Emergency Response to facilitate a three-way call with the passenger. In addition to the training provided for Remote Assistance Advisors, described below, these experts also complete: (1) one week of classroom training on handling emergency situations and hazardous driving scenarios and must pass multiple certification exams on the topics covered; (2) an additional one week of shadowing veteran experts and Quality Assurance leads and closed course training; and (3) one month of shadowing a more senior expert.

Remote Assistance Advisors are responsible for responding to any issues that arise concerning Cruise AVs in real-time. Each member of the Remote Assistance team is required to have a valid driver's license and complete rigorous training. Remote Assistance Advisors receive one week of classroom training, two hours of training on a closed course, and three weeks of shadowing experience. They also must pass certification exams in all assistance types before beginning to support Cruise AVs on public roads. Remote Assistance Advisors are shadowed by more experienced Remote Assistance Advisors until they demonstrate the highest level of proficiency and accuracy to safely assist Cruise AVs without being shadowed. In addition, their sessions continue to be internally audited by Cruise, and they receive weekly coaching on an ongoing basis regardless of tenure.

Customer Support: The Customer Support team consists of Customer Support Advisors who handle communications with passengers. They also escalate emergency situations to OnStar Emergency Response and the Remote Assistance team. In some cases of a confirmed collision or a passenger-reported emergency, the Customer Support Advisor will conference in OnStar Emergency Response to a three-way call with the passenger, facilitate emergency medical response and/or dispatch first responders as needed. Passengers can reach a Customer Support Advisor for voice support through the two-way communications link in the Cruise AV. Passengers also can reach a Customer Support Advisor through the phone support function using their personal devices, messaging, and email support in the mobile app. Customer Support has visibility into the state of the Cruise AV and is able to guide the passenger through self-help within the mobile app to update their ride or account details as needed. In addition, Customer Support may control the Cruise AV's in-vehicle cabin settings, such as locking and unlocking doors, rolling down windows, honking the horn, or turning on hazard lights.

Figure 23 below is an illustration of the Customer Support channels:

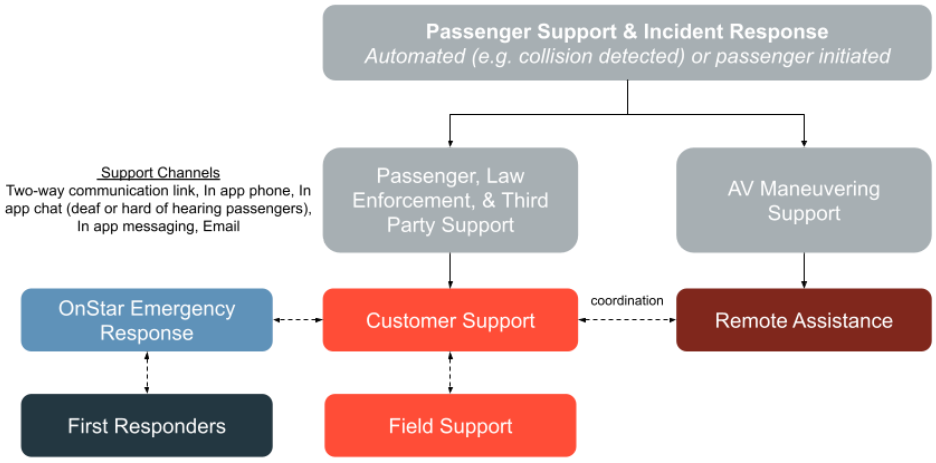

Figure 23: Customer Support channels

Customer Support Advisors undergo one week of classroom training and remain in trainee status for two months during which time their communications with passengers are thoroughly reviewed for quality assurance and to identify training opportunities. Their communications are regularly audited, and they receive performance coaching on an ongoing basis.

Trust and Safety: The Trust and Safety team is a new team that consists of a Trust and Safety Policy Lead, a Trust and Safety Enforcement Lead, and a Data and Detection Specialist.[23] The team develops policies to prevent and mitigate platform safety issues to ensure a safe community for passengers. The team works alongside Customer Support to identify and respond to incidents, including any violations of Cruise's terms and policies, and conducts investigations into passenger incidents and complaints. After an investigation, the Trust and Safety team will take the necessary action to respond, such as educating the passenger of Cruise's policy or deactivating a bad actor's account.

5.5.2. Incident Response

As discussed in Section 5.5.1, in the event of an emergency, Cruise's Customer Support team is available on-demand to our passengers for immediate assistance and are responsive to a broad range of scenarios, including medical emergencies. OnStar Emergency Response and Field Support also are available to support passengers and respond to incidents. Cruise's Remote Assistance, Customer Support, and OnStar Emergency Responders are highly trained and work with first responders as necessary to prioritize the safety of passengers and to maximize efficiency and response times.

[23] Cruise anticipates that the Trust and Safety team will continue to grow as we scale.

OnStar Emergency Response: A passenger can be connected with OnStar Emergency Response in one of two ways. First, if the passenger reaches out to Customer Support and alerts them to an emergency requiring medical response or law enforcement, Customer Support can escalate the call to Remote Assistance and Onstar Emergency Response to simultaneously provide passenger and vehicle support. Second, OnStar's Automatic Crash Response can automatically initiate contact with Cruise's Customer Support team and a trained OnStar Emergency Response Advisor, who will notify 9-1-1 dispatch without relying on passenger action. Remote Assistance will also be automatically added to provide necessary vehicle support.

Field Support: In any situation in which the Cruise AV is unable to continue autonomously, Cruise has the ability to dispatch a Field Support team, which consists of two Field Support representatives. Field Support provides another layer of safety for passengers as remote teams can conduct a handoff to the Field Support team seamlessly. Field Support can provide direct, in-person assistance to any passenger to ensure full resolution of any ride interruption, including information exchange with a third party in the event of a collision. Field Support also can work with public safety officials who may be on the scene and can facilitate retrieval of a disabled Cruise AV, including towing.

6. Incident Response

6.1. Public Safety

Cruise works closely with public safety officials and has conducted training and demonstrations to provide guidance and walk-throughs showing how first responders and law enforcement can safely interact with the Cruise AV. Public safety officials, including those in San Francisco, are equipped with contact information on how to reach Cruise in emergency and non-emergency situations through the Guide for Law Enforcement & First Responders for Interacting with a Cruise Autonomous Vehicle, which has been approved by the California DMV and the California Highway Patrol and is available through a link on Cruise's Resources for First Responders public webpage.[24] Public safety officials also are familiar with our vehicles and the associated technologies. As a result of our continued collaboration, we are confident that we can coordinate with first responders effectively and efficiently in any emergency situation to provide a safe service for our passengers in our expanded deployment ODD and as we expand further.

6.2. Passenger-Reported Incidents

The safety of our passengers and those sharing the road with Cruise AVs are of utmost importance to Cruise. Cruise is prepared to support our passengers through any possible or perceived threat to their safety, health, or well-being. In the event that a passenger's safety could be compromised

[24] *See* Cruise, Cruise Resources for First Responders (updated Dec. 15, 2022), https://www.getcruise.com/firstresponders, which includes a link to the A110 Law Enforcement Interaction Plan. The A110 Law Enforcement Interaction Plan also is referred to as the Guide for Law Enforcement & First Responders for Interacting with a Cruise Autonomous Vehicle. A copy of the Guide for Law Enforcement & First Responders for Interacting with a Cruise Autonomous Vehicle is attached as Exhibit A.

due to external factors like a collision, hostile individual, regional emergency, or personal factors like a passenger health emergency, Cruise's teams are prepared to respond in real-time. Concurrently, passengers have multiple pathways inside the vehicle or through the mobile app to communicate that an incident is occurring. In addition, Cruise will initiate communications automatically with passengers when Cruise detects these events.

This passenger communication will allow Cruise to:

- Determine the best response to the incident, which could include requesting assistance of first responders through OnStar.
- Remotely place temporary avoidance areas to direct the vehicle to take a different path.
- Send out a Field Support team to provide in-person, direct support to address passenger needs.
- End the ride at the passenger's request.

6.3. Fleet Monitoring and Learning

Cruise continuously monitors its driverless fleet while it is in operation. Cruise uses a suite of internal tools to oversee its fleet of Cruise AVs, including information about each Cruise AV on the road, such as their current location, operating condition and passenger states.

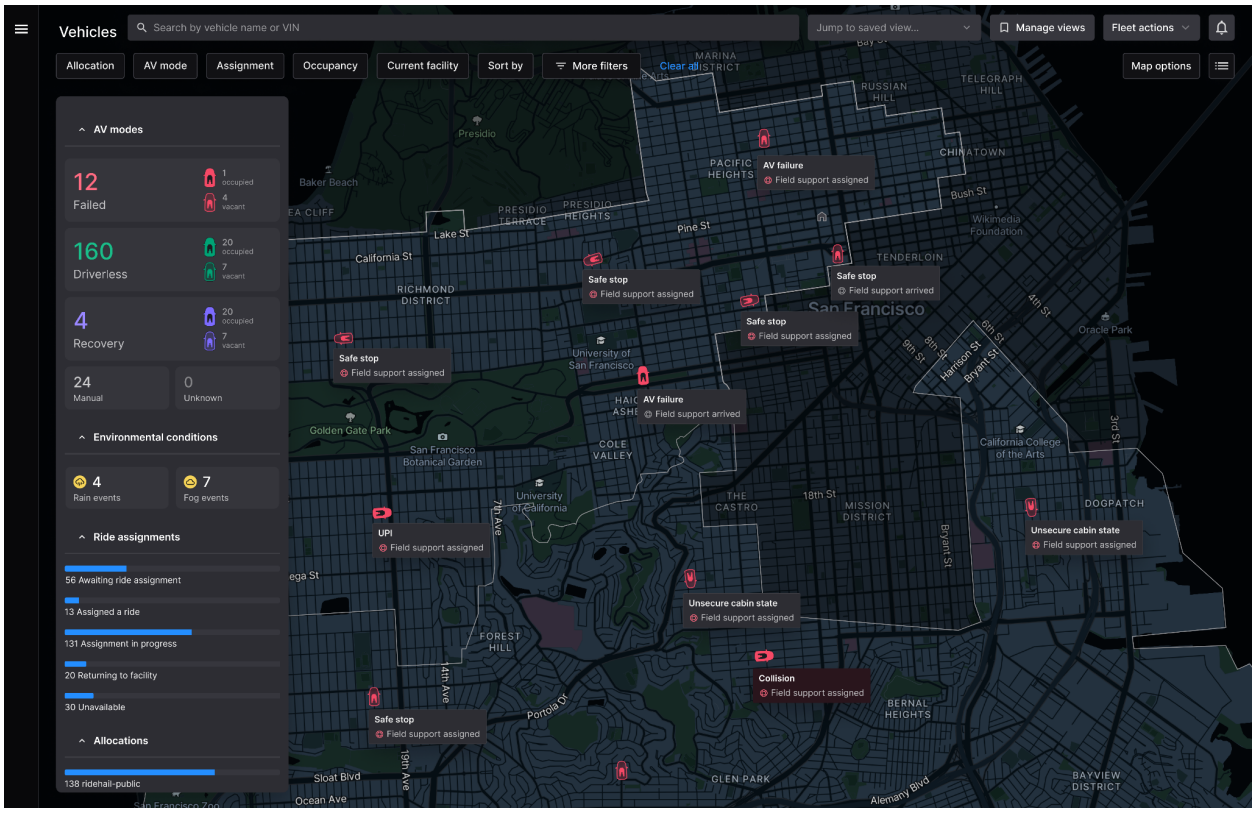

Figure 24: Cruise internal fleet monitoring tool (provided as example; actual may vary)

In traditional driving, each new driver has a learning curve and individual experience matters (e.g., teenage drivers are more likely to get into crashes than older, more experienced drivers[25]). In addition, in traditional driving, learnings from one driver generally are not passed on to other drivers. In contrast, Cruise's fleet operates by fleet learning. For example, if one car detects a closed road, that information can be shared with the fleet. Or if there's a dangerous road hazard, a single car can notify the fleet to avoid a potentially unsafe situation. As a result, the combined learning accrued minute-by-minute across Cruise's entire fleet allows each Cruise AV to continually improve from the experience of every other Cruise vehicle, enabling continuing safety improvements over time.

6.4. Unsafe Scenarios

Cruise has designed a thoughtful, integrated system of automated monitoring and response to passenger feedback to appropriately detect and respond to unsafe scenarios outside the vehicle. As discussed above, we seek to support passengers at all phases of their journey and may be reached immediately at any time of day if a passenger has a safety concern. When safety scenarios occur, we have well-trained Customer Support, Remote Assistance, and OnStar teams to provide passenger support, in addition to a Field Support team that can be dispatched to passengers, as discussed in Section 5.5. As stated in Section 2.2, Cruise currently is not providing driverless pooled rides.

In the case of a hostile individual outside the Cruise AV, we follow a protocol honed through millions of miles of San Francisco driving:

- If possible, take safe evasive action to attempt to remove the Cruise AV and passenger from the situation.
- If necessary (likely due to continued escalation or passenger request), escalate to OnStar Emergency Response including notifying local emergency responders to the scene if needed.

Our Incident and Crisis Management Team ("ICMT")[26] also proactively prepares for emergency preparedness and incident response. ICMT mobilization is tailored based on the nature of the situation but can include representatives from our safety, security, engineering, operations, legal, government affairs, communications, people, and other teams. To date, this capability has been used to coordinate responses to COVID-19, civil unrest, wildfires and other contingency situations. We also conduct regular preparedness exercises for our readiness to respond to safety-related incidents. These exercises range from "tabletop" discussions in which key responders walk through responses to hypothetical crisis situations to full-scale exercises designed to simulate real events as closely as possible.

[25] National Highway Traffic Safety Administration, *Traffic Safety Facts*, *2018 Data, Young Drivers* ,DOT HS 812 968 (Oct. 2020), https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812968.
[26] Cruise's Incident and Crisis Management Team formerly was called the "Crisis Management Team."

If a natural disaster occurs, such as a fire or earthquake, we have protocols in place to respond quickly and ensure passengers receive support to safely navigate the situation. In the event a fire occurs, our team will place an avoidance area in the Cruise AV map to prevent vehicles from entering the area. If a Cruise AV is already present in the area of the fire, we will summon the Cruise AV out of the area. If summoning the vehicle cannot safely occur, Remote Assistance will coordinate with OnStar to dispatch emergency responders to the Cruise AV. If an earthquake occurs, Cruise will ground individual Cruise AVs or the entire fleet depending on the severity of the event. If it is not possible to safely recall all Cruise AVs or dispatch Field Support, Cruise's Remote Assistance will coordinate with OnStar to dispatch emergency responders to the scene.

We are also aware that unsafe scenarios can occur in the absence of hostility or regional disasters due to the dynamic nature of city streets. As noted previously, prior to taking their first ride, passengers receive the Cruise Community Rules that remind them to watch for other road users when exiting the Cruise AV. In addition, as noted in Section 4.3 and illustrated in Figure 17, when passengers arrive at their destination, they receive guidance on how to exit the Cruise AV safely with consideration for other road users. As the Cruise AV navigates city streets, it communicates its intent and actions to other road users through traditional methods used by human drivers, such as a turn signal to indicate an approaching turn, hazard lights to signal a stop and horn to be used sparingly in emergency situations.

6.5. System Failure

Redundancy is built into the Cruise AV design. Cruise has increased end-to-end redundancy through multiple access points to cellular carriers and packet delivery. However, should any issue arise with any part of the Cruise AV or if a change is detected in the operating environment, the Cruise AV is designed to come to a stop at the nearest available safe stopping location and achieve a MRC.

Cruise's Customer Support team then reaches out to passengers to provide guidance, assistance and next steps, which may include reassurance that the Cruise AV will continue its operation or dispatch of a Field Support representative as necessary. In addition, the in-vehicle touchscreens will alert passengers to updates and next steps. Cruise's Field Support team can prioritize high severity events and ensure timely on scene response.

6.6. Collisions

The Cruise AV meets all federal crashworthiness standards.

As discussed above, the Cruise AV is based on the NCAP 5-Star safety-rated Chevrolet Bolt EV. Working with General Motors, we analyzed the vehicle's structural integrity to account for the addition of several new key systems to the vehicle (e.g., the sensor roof module, sensor cleaning and drying system, power backup system, and data management system). To best protect passengers, we:

- Engineered load paths to manage crash forces to protect the passenger space during frontal, side, rear and rollover crashes.
- Designed a battery housing structure to protect the internal battery space in a crash and minimize lithium battery fire risks for passengers and first responders.
- Installed vehicle floor reinforcements to distribute loads and maintain passenger space in a crash.

Together, Cruise and General Motors have completed robust and sufficient simulations and crash testing of the Cruise AV to show the effectiveness of the above requirements.

The air bags and seat belts in the Cruise AV meet Federal Motor Vehicle Safety Standards, including injury protection. Our all-electric self-driving vehicle also incorporates battery safety measures. In addition to the reinforced structure for the battery compartment, the Cruise AV is equipped with a crash-safety system that cuts power in the event of a collision, making it safer for first responders to assist at the scene.

Cruise's requirements for post-crash behavior account for both physical safety and standard practices in the event of a crash. After a crash, depending on the severity, the Cruise AV will either relocate to a safe stopping location or immediately stop and enter a safe state MRC. The vehicle will automatically apply brakes to bring the vehicle to a complete stop in a controlled manner after the initial impact. Built-in sensors will automatically alert a Cruise's Remote Assistance and Customer Support teams when there is a collision. In the event of a high-severity collision, both a Cruise Customer Support Advisor and an Onstar Emergency Response Advisor will be connected automatically through the Automatic Crash Response system to see if a passenger needs help and communicate with first responders on the scene. For every significant collision, Cruise will also dispatch a Field Support team to the scene to provide passenger support and liaison with public safety officials and other third-parties that may be on the scene. If passengers do not respond, or none are present, the OnStar Emergency Response Advisor will communicate with the Cruise Customer Support Advisor to gain situational awareness and communicate with local responders.

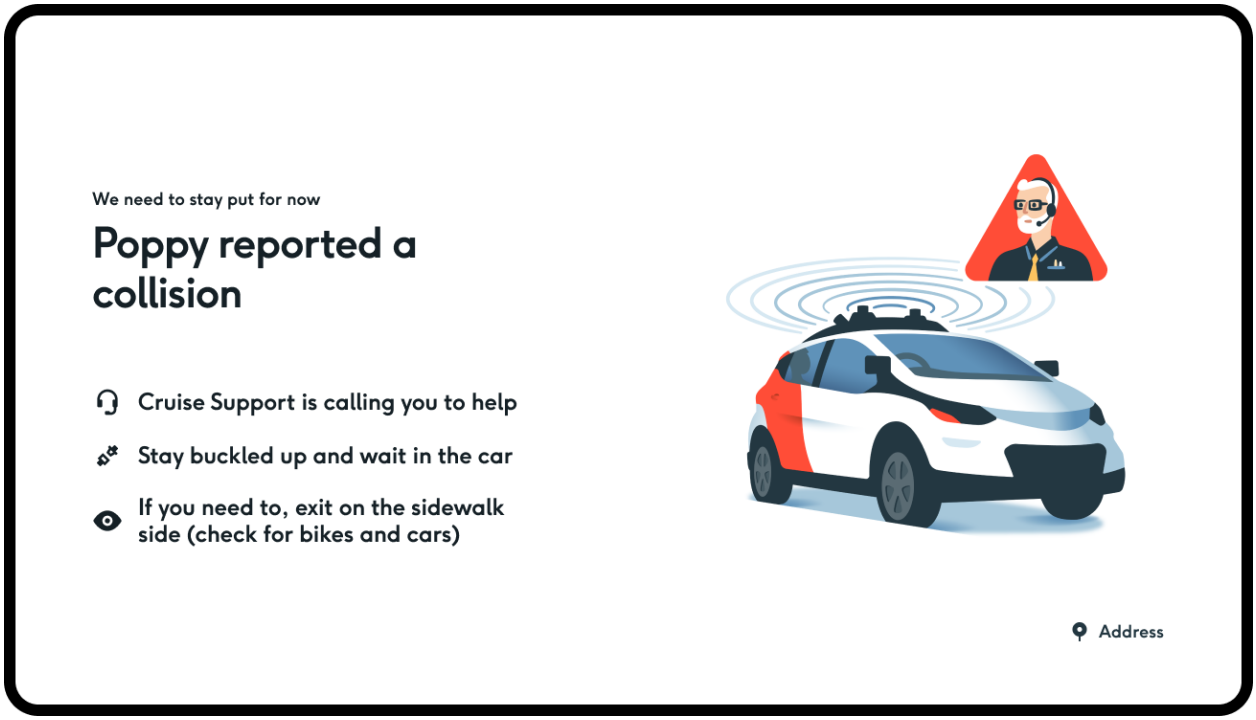

Figure 25: In-vehicle collision notification (provided as example; actual may vary)

7. Conclusion

At Cruise, safety drives everything we do. We are committed to implementing best practices and improving over time with essential feedback from passengers to ensure that our all-electric Cruise AV passenger service can safely connect people to the places and experiences that they care about. The expansion of Cruise's service to the full 7x7 San Francisco during all hours, day and night, is another important step in providing a safe all-electric self-driving service ultimately advancing the transportation landscape as we know it. We look forward to welcoming you aboard.

8. Appendix

8.1. Operational Design Domain

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.
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

Operational Design Domain in San Francisco from Cruise's Amended DMV Deployment Application

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EXHIBIT A

cruise

Guide for Law Enforcement & First Responders for Interacting with a Cruise Autonomous Vehicle

A110 (Chevy Bolt Platform) Version

Updated October 2022

cruise

Document Objective

This document provides guidance to law enforcement and first responders regarding Cruise LLC ("Cruise") and how to interact safely with our Chevy Bolt-based vehicles on the road in a variety of scenarios. Additional information about Cruise's safety program can be found in the *General Motors 2018 Self-Driving Safety Report*[1] and the *2018 Self-Driving Safety Report: Appendix A*.[2] Further information on how Cruise develops our systems, including for the Origin, can be found in our *Under the Hood* presentation.[3]

Cruise Vision

Cruise is an all-electric self-driving technology company with a mission to build the world's most advanced autonomous vehicles to safely connect people to the places, things and experiences they care about. Founded in San Francisco, California in 2013, Cruise is committed to developing a shared, purposeful self-driving service that we believe will bring new safety, accessibility and environmental benefits to more communities.

Cruise's mission is founded on the profound premise that today's transportation status quo is fundamentally broken. In 2021, an estimated 42,915 died on U.S. roads, an increase of 10.5% from 2020, with major percentages for pedestrians and cyclists as well.[4] The toll is astronomical globally: more than 1.3 million people died on roads around the world.[5] The transportation sector is also known to be the single largest contributor to greenhouse gas emissions in the country, accounting for nearly 30% of total emissions.[6] In our home state of California, transportation's portion is an even larger contributor, accounting for more than 40% of emissions.[7] In addition, despite revolutionary changes in transportation, progress has been uneven. Six million people with disabilities do not have access to the transportation they need.[8] A 2014 Harvard study found that commute times and access to employment opportunities proved to be some of the strongest predictors of upward mobility.[9] The bottom line is that transportation today is too dangerous, polluting, inaccessible and expensive, and Cruise believes the root of these failures lie with the 20th century model of the human-driven, internal combustion,

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[1] *2018 Self-driving Safety Report,* GM, https://www.gm.com/content/dam/company/docs/us/en/gmcom/gmsafetyreport.pdf.
[2] *2018 Self-driving Safety Report Appendix,* GM, https://www.gm.com/content/dam/company/docs/us/en/gmcom/2018%20Self-Driving%20Safety%20Report%20Appendix%20A_DIGITAL_180614b.pdf.
[3] '*Under the Hood' virtual event,* Cruise video (November, 2021) https://www.youtube.com/watch?v=uJWN0K26NxQ.
[4] *Newly Released Estimates Show Traffic Fatalities Reached a 16-Year High in 2021*, NHTSA (May 17, 2022), https://www.nhtsa.gov/press-releases/early-estimate-2021-traffic-fatalities.
[5] *Global Status Report on Road Safety 2018*, WHO (June 17, 2018), https://www.who.int/violence_injury_prevention/road_safety_status/2018/en/.
[6] *Sources of Greenhouse Gas Emissions*, EPA, https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions.
[7] *GHG Current California Emission Inventory Data*, CARB, https://ww2.arb.ca.gov/ghg-inventory-data.
[8] *Self-Driving Cars: The Impact on People with Disabilities*, Ruderman Family Foundation, https://rudermanfoundation.org/white_papers/self-driving-cars-the-impact-on-people-with-disabilities/.
[9] *Where Is the Land of Opportunity? The Geography of Intergenerational Mobility in the United States*, National Bureau of Economic Research (Jan. 2014), https://www.nber.org/papers/w19843.pdf.

single-occupant vehicle. That is why Cruise is designing, developing, testing, and deploying autonomous vehicles that can provide both an alternative and a solution.

To further the objectives of safety, sustainability, accessibility and equity, Cruise has developed the Cruise Autonomous Vehicle (AV) with the future goal of launching a self-driving service. The Chevy Bolt-based Cruise A110 vehicle is purpose-built as a self-driving vehicle at a dedicated manufacturing plant in Lake Orion, Michigan, employing a safety-by-design approach that provides critical system redundancy. Each Cruise A110 AV is designed with seamless hardware and software integration utilizing automotive grade technologies and processes, and crash tested extensively to ensure passenger safety.

Safety is Cruise's North Star. Cruise is developing and testing vehicles with advanced sensors that provide rich information about the world. We leverage the latest machine learning techniques and our powerful cloud-based tools to help our vehicles understand what's happening around them and what might happen in the future. We envision a future where AV technology has a positive overall impact on automotive safety and public health. We work tirelessly toward this goal because we believe deeply in its promise and know its impact will be measured in lives saved.

Additionally, because Cruise is committed to a clean, sustainable future for transportation, we utilize an all-electric AV fleet everywhere we operate and were the first self-driving company to power its vehicles with 100% renewable energy.[10] As a purpose-built fleet, we view our self-driving service as a way to expedite the electrification of transportation, which studies show will yield improved health outcomes.[11] Cruise customers need not worry about purchasing an electric vehicle nor about when or how to charge. In this way, Cruise A110 AVs can dramatically increase access to clean, electric miles for those who may not be able to afford an EV, may not be in the market for a new vehicle, or like the millions of Americans that rent in our cities, not have access to chargers or the ability to install them.

Cruise believes AV technology has an historic opportunity to bridge gaps in transportation accessibility and equity that have existed for far too long. Cruise recognizes the significant benefits a self-driving service could have for seniors and people with disabilities, empowering greater independence and connection to community. Cruise actively partners with stakeholders within the accessibility community to understand the challenges faced within current transportation options and to co-design potential solutions with Cruise specialists. Cruise also recognizes that advances in transportation have not been inclusive in their beneficiaries, especially in lower socioeconomic and minority communities. Cruise is proud to be a part of Pledge 1%, utilizing at least one percent of our fleet for social good in perpetuity.[12] AVs developed by Cruise provide the opportunity to bridge the gap for individuals and organizations who otherwise would not have access to such advances in technology.

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[10] *Cruise Becomes First Self-Driving Company to Power Vehicles With 100% Renewable Energy*, Cruise Blog (Apr. 22, 2020), https://medium.com/cruise/cruise-becomes-first-self-driving-company-to-power-vehicles-with-100-renewable-energY-3c7a7974590c.

[11] *Zeroing in on Healthy Air*, American Lung Association (Apr. 2022) https://www.lung.org/clean-air/electric-vehicle-report.

[12] *Cruise Joins the Pledge 1% Movement, Introducing Cruise for Good, Pledge 1% (April 23, 2021),* https://pledgeitforward.today/cruise-joins-the-pledge-1-movement-introducing-cruise-for-good/

cruise

Cruise is committed to designing a shared, all-electric, self-driving service to strengthen and connect communities and experiences. After years of careful testing, thoughtful development, and robust validation, Cruise is deploying fully driverless vehicles on public roads. As with our enduring commitment to safety in drivered testing and deployment, Cruise will conduct driverless deployment with the same level of care. We believe that our incremental approach will ensure that we are able to bring the benefits of this technology to the public as safely and efficiently as possible.

Guide for Law Enforcement & First Responder Safe Interaction with Cruise A110 (Chevy Bolt-based) Autonomous Vehicles

Introduction:

Cruise's mission is to build the world's most advanced autonomous vehicles to safely connect people to the places, things, and experiences they care about.

At scale, self-driving technology holds the potential to save millions of lives, reshape our cities, reduce emissions, give back millions of hours of time and restore freedom of movement. At Cruise, we believe that the right way to build that future is to do it side-by-side with the community, especially with our partners in law enforcement and public safety.

We regularly work with state and municipal public safety officers where we operate and beyond, and have conducted multiple training sessions with law enforcement and first responders across the country in the localities where we test. Through these training sessions, we provide law enforcement and first responders with the information they need to safely identify and interact with our Cruise A110 Autonomous Vehicles (AV).

This instructional guide builds on those engagements and is designed to equip public safety officials with the information they need to safely interact with the Cruise A110 AVs in multiple scenarios.

cruise

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Cruise's goal is to develop an autonomous vehicle that improves road safety, and we are committed to doing so in a way that supports the crucial work of public safety officials wherever we operate. If you have additional non-urgent questions regarding the Cruise A110 AV not provided by this guide, please contact firstresponders@getcruise.com. For all time sensitive inquiries, please call **888-662-7103**.

Cruise key contacts

Non-urgent: email firstresponders@getcruise.com

Time sensitive inquiries: call 888-662-7103

Section One: The Cruise A110 (Chevy Bolt-based) Autonomous Vehicle

Image of a Cruise self-driving, all-electric vehicle

The Cruise A110 AV is a fully integrated self-driving system based on the award-winning all-electric Chevrolet Bolt platform. While many law enforcement officers and first responders are familiar with the Chevrolet Bolt EV platform, the Cruise A110 AV is engineered to operate safely on its own - with no driver - within a defined operating environment and under a specific set of conditions.

cruise

At Cruise, it's every employee's job to make our product safe. Our first rule, always and everywhere, is safety first.

Cruise A110 AVs are built at a General Motors (GM) assembly plant in Orion Township, Michigan, which builds thousands of production vehicles every year. In concert with our partner GM, we engineered safety into the vehicle from the ground-up, at every step of design, development, manufacturing, testing and validation. The Cruise A110 AV is designed with seamless hardware and software integration, built to automotive grade standards, and crash tested as other production vehicles. All suppliers who manufacture components for the Cruise A110 AV are required to make sure their quality meets high standards.

Our self-driving system is integrated into the vehicle from the beginning. Through close coordination between the hardware and software teams at both GM and Cruise, we have evaluated potential failure modes for all systems, addressed them throughout development to ensure a safe and reliable product and built redundancy into every element of critical system functioning.

cruise

Identifying the Cruise A110 AV

Each Cruise A110 AV can be distinguished by orange branding on the exterior, and each vehicle has a unique identifier or vehicle name that can be found at the front hood, rear hatch, and right and left rear quarter panels.

Location of the name on each Cruise A110 vehicle.
Some Cruise vehicles have the unique name below the license plate, in lieu of "Self-driver in training" language.

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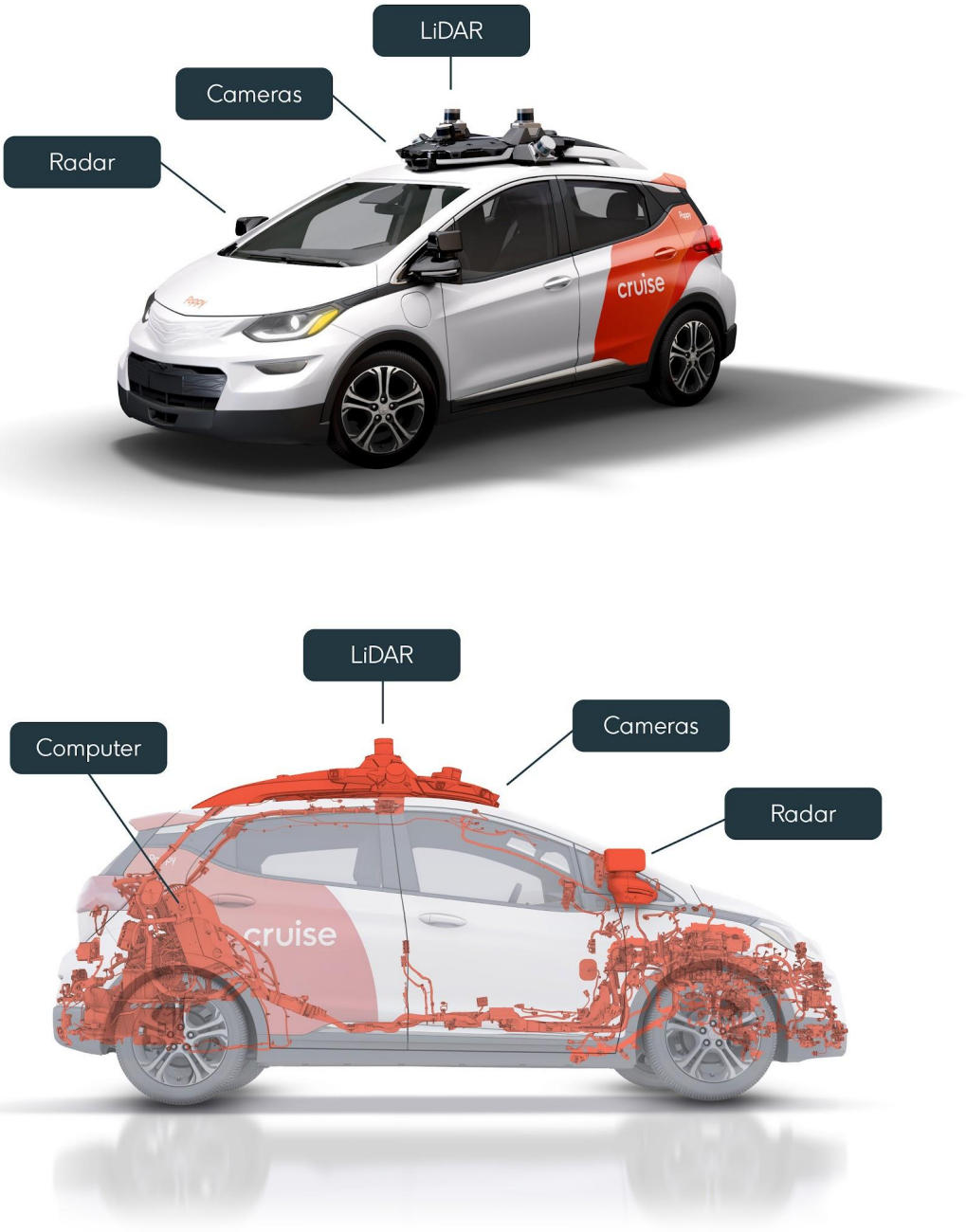
A hallmark of the Cruise A110 AV is its hardware sensor suite that is visible on the exterior. This array of sensors enables the Cruise A110 AV to gather information about its environment and inform the system's driving decisions. Inside the trunk of the AV is the computer that comprises the "brain" of the system and that rapidly synthesizes information collected by the hardware suite to inform driving behavior through perception (understanding the environment), prediction (evaluating possible safe paths or trajectories for the vehicle given the environment), and controls (the driving maneuver). More information about how the Cruise autonomous system works and is designed to be a safe driver is available in the **Cruise Safety Report** here.



Location of the Cruise hardware sensor suite and computer

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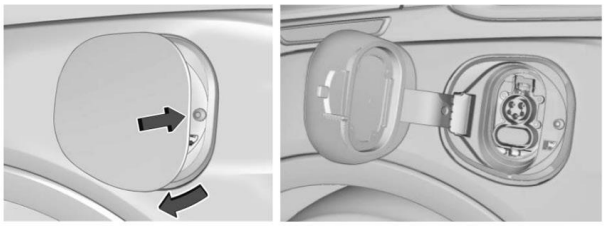
Inside the Cruise A110 AV

While the Cruise A110 AV is designed to be fully autonomous, public safety officials might encounter the vehicle with Autonomous Vehicle Test Operators (AVTOs) inside. This guide includes information that is relevant whether there are AVTOs inside the vehicle or not.

Vehicle Identification Information

Each Cruise A110 AV is equipped with documentation that includes the vehicle registration, owner information, proof of insurance and any required permit information and can be found inside the charge port door. Location of the charge port door and instructions for how to open it are included below.



Push the rearward edge of charge port door and release to open the door

Location of charge port door on a Cruise A110 AV

Section Two: Communicating with the Cruise Team

The Cruise team brings comprehensive experience from relevant industries, such as transportation, technology, aerospace, defense and public safety. Our response procedures were designed, tested and vetted by former members of highway patrol and military firefighting divisions who applied best practices to ensure we can properly support and interact with law enforcement and first responders.

Contacting Cruise

To reach the appropriate Cruise contact, police officers and first responders should call Cruise's critical response line **888-662-7103**. Cruise's critical response line is staffed by an escalation team that is ready to respond to emergency and non-emergency events and inquiries. To ensure the high availability and resiliency of this phone number, Cruise hosts the critical response line on a verified third party platform that also serves other safety-critical services.

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Once connected with Cruise, first responders will be asked to provide the following information:

- Reason for your call
- Vehicle identification information (vehicle name located at the front hood, rear hatch, or right and left rear quarter panels)
- Geographic location information

In addition to Cruise's critical response line, each Cruise A110 AV is equipped with a two-way communications link inside the vehicle that can be used to directly connect with the appropriate remote team member depending on the situation. The communications link appears as two buttons (red SOS for emergency and blue for general inquiries) above the front and rear seats inside the vehicles.

Front upper console location

Middle upper console location

Cruise Remote Assistance

OnStar

However, to ensure the best support possible, we advise that public safety officials call the Cruise critical response line at **888-662-7103** rather than using in-car buttons designed for occupants.

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Cruise Incident Experts

When police officers and first responders call the Cruise critical response line, they have the option to connect with Cruise team members who are specially trained to actively monitor signals from the AV that indicate it may need assistance and can assist with technical issues related to the vehicle in non-emergency and emergency situations. For example, this team can facilitate unlocking the vehicle, confirm operating status, disengage the Cruise A110 AV from autonomous driving mode and ensure that it remains in a safe, stationary position. Specialized experts are also trained to communicate with passengers and third parties during emergency situations.

Law enforcement and first responders can contact Cruise Incident Experts by calling Cruise's critical response line: **888-662-7103**.

OnStar Emergency Assistance

Every Cruise A110 AV is also equipped with OnStar functionality. For more than 20 years, OnStar has offered peace of mind with the push of a button, and inside the Cruise A110 AV, there is a red SOS button that enables a two-way communication link that connects to an OnStar Emergency Advisor.

OnStar Emergency Advisors are available 24/7 to respond to medical emergency scenarios and can provide information to first responders before they arrive on the scene of an emergency. In addition, the Automatic Crash Response service can connect a trained Emergency Advisor to the Cruise A110 AV even in the event of an incident where an occupant may be unable to press the physical OnStar button.

Section Three: Incidents & Emergency Scenarios

The Cruise A110 AV is designed to be capable of identifying and responding to emergency and law enforcement vehicles, including having the capacity to safely yield to an emergency vehicle with lights and sirens activated. The Cruise A110 AV is designed to and can identify emergency vehicles and their multitude of lights and sirens even in situations with limited visibility, such as through fog or over hills, or in situations that do not follow traditional protocol, such as when an emergency vehicle travels the wrong way down a one-way road.

In this section, we provide guidance for first responders on how to safely interact with the Cruise A110 AV on the scene of an incident or emergency scenario. As a precaution and when circumstances allow, we ask responders to call Cruise's critical response line **888-662-7103** to reach Cruise teams before interacting with the vehicle and for additional information and support.

Responding to Non-Emergency Incidents

For a non-emergency event or incident, please call Cruise's critical response line **888-662-7103** where you will have the option to connect with a Cruise team member. The Cruise monitors the AV fleet at all times, and Cruise

team members are available for relevant questions during driverless testing and can escalate in emergency situations. Please contact them before approaching and interacting with the Cruise A110 AV.

As mentioned above, the Cruise A110 AV is designed to be capable of identifying and responding to law enforcement vehicles. In the event of a law enforcement traffic stop, the Cruise A110 AV is designed to detect law enforcement lights and sirens. If the Cruise A110 AV detects the lights and sirens while it is moving, the Cruise A110 AV may continue motion in order to search for a safe stopping location and perform an out of lane pulover maneuver. If the Cruise A110 AV detects the lights and sirens while it is not moving, the Cruise A110 AV will attempt to move out of lane, to the extent possible due to traffic conditions, and will stop. In both situations, once the Cruise A110 AV has stopped, a Cruise team member will be connected and the Cruise A110 AV will disengage from autonomous mode to manual mode. The Cruise team member will remain connected to further assist or the law enforcement officer can call Cruise's critical response line at **888-662-7103** in the event that the Cruise team is not already connected. Once the Cruise A110 AV has been disengaged from autonomous mode, the Cruise A110 AV will not move until Cruise is on scene to retrieve the vehicle. For more information on moving the Cruise A110 AV, please refer to the Safety Moving the AV, Towing, and Pushing sections below.

Responding to an Emergency

OnStar Emergency Advisors are available 24/7 to receive emergency calls from the Cruise A110 AV - either by pressing the emergency red SOS button two way communications link inside the AV or automatically through the Automatic Crash Response system. In addition, Cruise team members monitor the fleet in real time and will immediately identify an emergency scenario should one occur.

In the event of an emergency, the OnStar Emergency Advisor will assess the situation and then inform the appropriate public-safety access point (PSAP) that the situation involves an AV, identify whether the car is or isn't parked and provide the case and callback number. The OnStar Emergency Advisor then informs 911 call takers and first responders about the AV incident including an analysis of the crash severity and if there is an AVTO present in the vehicle.

Upon arriving at the scene, we recommend that first responders contact Cruise's critical response line by calling **888-662-7103** when possible before approaching or interacting with the Cruise A110 AV.

Approaching the AV - When a Cruise Representative is Present

It is a priority in our training program to educate our team how they should respond to a range of potential incidents, from a flat tire, to another vehicle bumping into the Cruise A110 AV or more severe potential situations. They are instructed on how to interact with first responders. If an emergency arises and Cruise representatives are present, the representative may be able to assist with the following:

1. Disable self-driving mode and, if possible and needed, relocate the vehicle to a safe location
2. Ensure the vehicle remains immobilized
3. Provide vehicle registration, insurance, and his/her driver's license upon request
4. Give instructions for towing, if required

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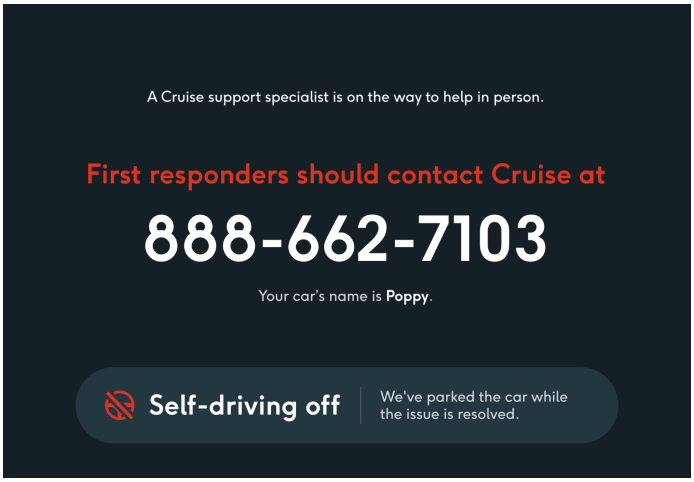
Approaching the AV - When a Cruise Representative is Not Present

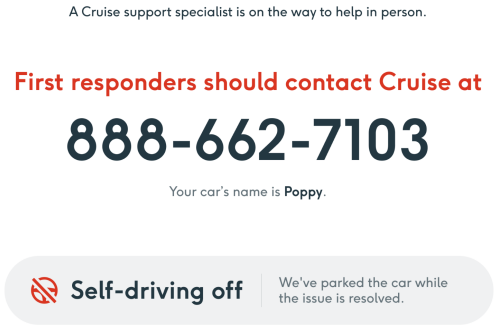
If an incident or emergency arises and a Cruise team member is not present or not able to serve as a resource, first responders should:

1. Call the number **888-662-7103** to be connected to the Cruise Incident Expert and follow the verbal instructions from the Advisor on how to approach the Cruise A110 AV from the rear or side, rather than the front
2. Receive information from the Cruise Incident Expert pertaining to current status of AV
3. Continue to follow instruction from the Cruise Incident Expert on how to safely interact with the Cruise A110 AV as necessary

Determining Autonomous Mode

After being connected with the Cruise team and approaching the Cruise A110 AV from the rear or side, the law enforcement official or first responder can also determine whether the vehicle is in autonomous mode or manual mode by looking at the tablet in the center of the car's front panel. The tablet in the front center console should be displaying an information screen, showing that the vehicle is not in autonomous mode and directing first responders to contact Cruise. Cruise can confirm this information.





Images of the types of information shown on Cruise A110 AV display screens in first responder situations. Specific language and design aspects are subject to change.

Disengaging to Manual Mode

Our Incident Experts are always available during testing to support first responders and safely guide them through the disengagement process. Please contact them before attempting to move the vehicle.

Confirming Manual Mode

The Cruise team will confirm that the vehicle is in manual mode. In addition, the tablet in the center of the car's front panel should depict a white circle icon of the AV if operational in manual mode.

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Safely Moving the AV

Once autonomous mode has been disabled, the Cruise A110 AV can manually be placed into park or neutral. Cruise will initiate vehicle retrieval when required and if a Cruise team member is on-site, they will provide specific towing instructions. In exigent circumstances, first responders can use the following information to move the vehicle.

Towing

First responders should call Cruise's critical response line **888-662-7103** and Cruise will initiate vehicle retrieval. Cruise representatives will be dispatched in the event of a disabled AV and will facilitate AV retrieval, including towing if required. If needed, via contact information provided in the Law Enforcement Interaction Plan, Cruise can remotely instruct emergency responders on interaction with the AV. In exigent circumstances, the Cruise A110 AV can be towed on a flatbed using standard wheel dollies on rear wheels via the same process that would be used to tow an immobilized Chevy Bolt.

Pushing

First responders should call Cruise's critical response line **888-662-7103** and Cruise will initiate vehicle retrieval. In exigent circumstances, the Cruise team can facilitate unlocking of doors, disengage the Cruise A110 AV, and confirm that the vehicle is in manual mode. Once in manual, the Cruise A110 AV can be shifted into neutral and pushed like any other vehicle.

Providing Emergency Assistance for Electric Vehicles

Cruise is proud that all of our AVs are all-electric and operate on the Chevrolet Bolt EV platform. GM has conducted nationwide safety tours that included talking to the National Fire Protection Agency, the International Association of Fire Fighters, the International Association of Fire Chiefs, the Association of Public-Safety Communications Officials, fire chiefs, police chiefs and 911 call centers. GM also trained over 15,000 people across the nation on safety protocols related to the base vehicle.

There are a few specific safety instructions that first responders should know when responding to a situation involving an EV; however, all standard operating procedures (size-up, approach, immobilize, extinguish) for first responders still apply. There are no increased risks if the vehicle is on fire or immersed in water.

More information can be found at GM First Responder Guides and the Electric Vehicle Safety for Emergency Responders Online Training.

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High Voltage and Airbag Disconnect Procedures

To disconnect the high voltage battery and airbags, open the hood and follow the Cruise A110 AV First Responder Quick Reference Guide.

First Responder (FR) High Voltage & Airbag Disconnect Procedure

Do not cut any orange high voltage cables

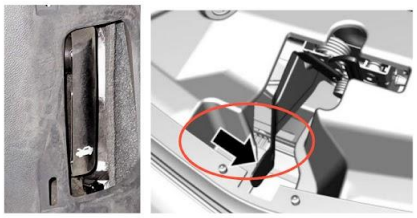
1 **FR standard operating procedure**
Size-up, approach, immobilize, extinguish

Field scenario
There is NO increased risk to first responder if vehicle is:
- On fire
- Immersed in water

2 **Turn vehicle off**
Push Start/Stop button - gauges turn off

Preferred disconnect procedure

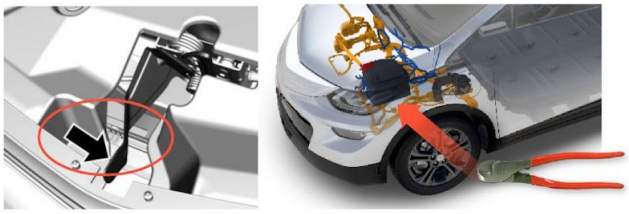
3 **Open hood to access labeled 12V cut location**
- Pull interior release lever
- Secondary release lever under front center of hood



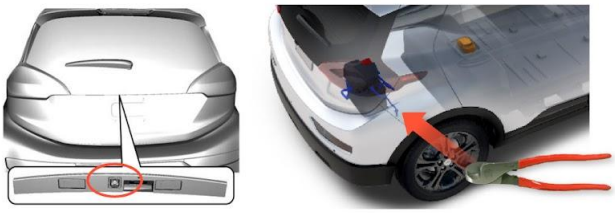
4 **Cut and remove section of 12V cable covered with a first responder label**
Driver side of engine compartment

Backup disconnect procedure

3 **Open hood to access 12V ground wire, cut, and remove section of ground wire**
Driver side of engine compartment



4 **Open rear hatch to access 12V ground wire, cut, and remove section of ground wire**
Passenger side of rear compartment



Emergency extrication cut points

Note: Removal of articulating radars (in location of side-view mirrors) may be required to improve A-pillar access.

Caution: Use caution with removal of roof, center of gravity, and weight are impacted by autonomous vehicle-specific sensors.

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Section Four: Frequently Asked Questions - one-page PDF version

Will contact information be available in each vehicle?
Each Cruise A110 AV is equipped with the vehicle registration, owner information, proof of insurance and other documents such as the AV testing permit, accident guide and additional towing information.

Will there be a 24-hour policy contact line?
Yes. Law enforcement officers and first responders can reach Cruise by calling our critical response line: **888-662-7103**. This line is staffed by Cruise team members to handle general inquiries, incidents, and emergencies. It is also the best line of communication to reach Cruise's remote team before interacting with the AV.

If there is an emergency on-board the vehicle, can the vehicle notify the police or medical rescue remotely?
Yes. Each Cruise A110 AV is equipped with OnStar emergency services. Through its Automatic Crash Response service, OnStar can connect a trained Emergency Advisor to the AV.

Does the vehicle have additional safety shutdown procedures to make sure the vehicle doesn't drive itself away while first responders are on the scene?
If the Cruise A110 AV detects an incident, it will achieve a minimal risk condition and come to a stop. In addition, Cruise monitors the AV fleet at all times during testing and can confirm the mode of the Cruise A110 AV and disengage it into manual mode. Please call Cruise's critical response line to speak to the Cruise team before approaching or interacting with the AV.

How can first responders gain access to the interior if it is locked?
The Cruise team can facilitate first responders gaining access to the interior of the Cruise A110 AV. Please call them at **888-662-7103**.

What is the stolen vehicle protocol?
Cruise's team is specially trained to monitor the AV fleet in real time, at all times and can work with OnStar to resolve any situation of unauthorized use.

If officials have questions about any Cruise A110 AV, please contact Cruise's critical response line: **888-662-7103**.

How do you confirm that the vehicle is in manual mode?
Our team can confirm the mode of the vehicle and can disengage the vehicle from autonomous mode to manual mode remotely.

To determine whether a Cruise A110 AV is in autonomous mode or manual mode, public safety officials can look at the tablet in the center of the car's front panel. If autonomous mode is engaged, the icon in the upper left will be filled as green or blue. If autonomous mode is disengaged and the vehicle is in manual mode, the icon in the upper left will appear as red.

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Are there additional power lines or cables we need to be concerned with like in hybrids or EVs that may present a safety issue when cutting into the vehicle?

All high voltage cables are indicated by an orange color and are also found in the First Responder High Voltage & Airbag Disconnect Procedure.

Are there additional power sources for the vehicle computer and electronics beyond the standard vehicle battery system?

In addition to the high voltage battery, two 12V lithium ion batteries power the AV. Cutting the cut point as indicated in the First Responder High Voltage & Airbag Disconnect Procedure will disconnect power to the airbags and open the high voltage contactors.

Are there any flammable liquids that must be accounted for?

The AV poses no unique flammability concerns. Copious amounts of water should be used to help cool and extinguish in case of battery fire.

Where is the vehicle's HV battery, how many volts does it have, and should it be shut off?

The HV battery is located in the center of the vehicle, under the passenger compartment as indicated in the First Responder High Voltage & Airbag Disconnect Procedure. Battery voltage is 350V. Performing the HV disable steps described in the First Responder High Voltage & Airbag Disconnect Procedure will turn off high voltage outside the battery. Regardless, orange cables should be treated as if they are powered - do not cut.

How are the vehicle's sensors impacted by weather?

The Cruise A110 AV is designed and built to properly recognize and respond to changing weather conditions. When the Cruise A110 AV detects rapid or abnormal changes in weather conditions, it may adjust how it operates to accommodate the weather and how other road users are behaving, such as when traffic slows in light rain.

The Cruise A110 AV also does not operate outside of set environments and conditions - our operational design domain (ODD), which means that the Cruise A110 AV will not drive in weather that falls outside of the ODD. Our Remote Assistance Advisors monitor the fleet at all times to help ensure each Cruise A110 AV remains within our ODD.

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.

ATTACHMENT 2

DEPARTMENT OF MOTOR VEHICLES
POLICY DIVISION
Autonomous Vehicles Branch
P.O. BOX 825393
SACRAMENTO, CA 94232-5393

December 15, 2022

Ms. Prashanthi Raman
Cruise LLC
333 Brannan Street
San Francisco, CA 94107

Dear Ms. Raman:

On March 24, 2022, the California Department of Motor Vehicles received the amendment Application for Permit to Deploy Autonomous Vehicles on Public Streets (form OL 321) submitted by Cruise LLC. The amendment is approved, effective December 15, 2022.

This letter serves as authorization for Cruise's request to include operations generally throughout the city of San Francisco and, within that area, specifically:

(i) on roadways with steep hills and roundabouts
(ii) on roadways with posted speed limits up to 35 miles per hour
(iii) at all hours of the day and night

Cruise LLC shall not deploy vehicles with any changes specified in the California Code of Regulations Title 13, Division 1, Chapter 1, Article 3.8 § 228.10(b) until an amended application is submitted and approved by the DMV.

If you have any questions, please contact me at (916) 417-1025.

Sincerely,

MIGUEL ACOSTA, Chief
Autonomous Vehicles Branch

ATTACHMENT 3

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Attachment 3 - Certification of Compliance with DMV Regulations

December 16, 2022

California Public Utilities Commission
Consumer Protection & Enforcement Division, License Section
505 Van Ness Avenue
San Francisco, CA 94102

To Whom It May Concern:

Pursuant to the California Public Utilities Commission Decision (D.)20-11-046, as modified by D.21-05-017, Cruise LLC ("Cruise) hereby certifies that, to the best of its knowledge, it is in compliance with all DMV regulations.

I certify under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

12/16/2022

Date

DocuSigned by:
Alicia Fenrick
C7097063861D4CD...

Alicia Fenrick, Associate General Counsel