

Connected and Automated Vehicle (CAV) Resources

Automated Vehicle Resources

If you encounter a driver-less vehicle or the driver cannot operate the vehicle, you can contact one of the manufacturers below to secure the vehicle. Hybrid and electric vehicles may make no noise even when the powertrain is energized. Lack of engine noise does not mean the vehicle is off.

Cruise

(888) 662-7103

Critical response line for public safety officials to contact the Cruise Incident Expert Team Cruise rather than using the incar buttons designed for occupants. When calling provide:

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

Non-urgent <u>firstresponders@getcruise.com</u>

<u>Interacting with a Cruise Autonomous Vehicle:</u>
<u>A Guide for First Responders - YouTube</u> (18:57 minutes)

<u>Cruise (getcruise.com)</u> Cruise resource webpage for first responders

<u>Cruise First Responder Guidance for Driverless</u>
<u>Vehicle Program</u> This 24-page guide includes vehicle diagrams, and emergency and towing information.

Tesla

(877) 798-3752

Phone number for roadside assistance. Please provide:

- Vehicle Identification Number (VIN)
- Exact location
- Nature of problem

<u>First Responders | Tesla</u> The Tesla webpage for first responders includes a 31-page Emergency Response Guide and 4-page Quick Response Sheet for each vehicle model. The guide includes vehicle diagrams including stored energy, and emergency and towing information.

Waymo Chrysler Pacifica or Jaguar I-PACE

(877) 503-0840

Toll-free 24-hour telephone hotline for police, fire departments, and other first responders to communicate directly with Waymo's specialists at any time during their vehicle testing and operation. Please provide:

- Numerical identifier of the vehicle
- License plate
- Location information

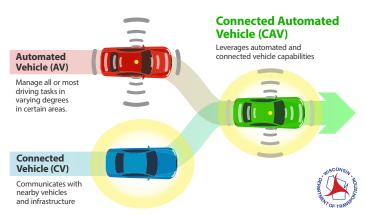
Waymo Emergency Response Guide and Law Enforcement Interaction Protocol This 37-page guide includes vehicle diagrams, and emergency and towing information.

Waymo First Responders Training - Bing video

Links to CAV Resources

- Wisconsin Department of Transportation (WisDOT)
 <u>Wisconsin Department of Transportation Connected</u>

 and Automated Vehicles (wisconsindot.gov)
- United States Department of Transportation (USDOT) Automated Vehicles Activities <u>USDOT Automated</u> Vehicles Activities | US Department of Transportation
- United States Department of Transportation (USDOT) Connected Vehicles <u>connected vehicles</u> <u>US Department of Transportation</u>
- United States Department of Transportation (USDOT) Intelligent Transportation Systems Joint Program Office Intelligent Transportation Systems - Connected Vehicle Basics (dot.gov)
- Federal Highway Administration (FHWA) Automated Vehicle Activities and Resources <u>Automated Vehicle</u> Activities and Resources | FHWA (dot.gov)
- Traffic Operations and Safety (TOPS) Laboratory topslab.wisc.edu/
- National Highway Traffic Safety Administration (NHTSA) Automated Vehicles for Safety Automated Vehicle Safety | NHTSA
- Partners for Automated Vehicle Education (PAVE) Past videos can be found under the EVENTS tab. <u>PAVE Campaign</u>
- American Association of Motor Vehicle Administrators (AAMVA) Automated Vehicles
- Society of Automotive Engineers (SAE) International https://www.sae.org/automated-unmanned-vehicles/
- Mid America Association of State Transportation Officials (MAASTO) MAASTO Connected and Automated Vehicle Summit 2019
- American Association of State Highway and Transportation Officials (AASHTO) https://cav.transportation.org/



wisconsindot.gov

WisDOT102022

Links to CAV Resources

Safety features by car model

Explanation of vehicle safety features MyCarDoesWhat.org

Self-driving features available by car model

https://www.cars.com/articles/which-cars-have-self-driving-features-for-2021-433821/

Sensors: Cameras, RADAR, LiDAR, ultrasonic

Medium, Radar

https://medium.com/@BabakShah/radar-in-self-driving-cars-5a31951164e2

Medium, LiDAR

https://medium.com/@BabakShah/lidar-in-self-driving-cars-cee29db94af7

Medium, Ultrasonic

https://medium.com/@BabakShah/ultrasonic-sensors-in-self-driving-cars-d28b63be676f

Medium, Sensor fusion, detection and classification of objects

https://gosaviatharva9.medium.com/autonomous-vehicle-3507f32f5b89

Fierce Electronics: Cameras, radar, LiDAR

https://www.fierceelectronics.com/components/three-sensor-types-drive-autonomous-vehicles

Sensor trade-offs by type

https://www.techbriefs.com/component/content/article/tb/stories/blog/37699

Leading companies to watch for:

Truck platooning

Locomation (automation) partnering with Wilson Logistics (trucking)

https://locomation.ai

https://www.wilsonlogistics.com/

Truck automation

Aurora (automation) partnering with: Schneider, FedEx, PACCAR, Toyota, Uber Freight, Volvo, Werner, U.S.Express, Covenant (trucking) https://aurora.tech/

Gatik (automation) partnering with Walmart/Sam's Club (warehousing) https://gatik.ai/

Nuro autonomous delivery vehicle https://www.nuro.ai/vehicle

Electric Vehicle Resources

Tesla Owners Club Wisconsin https://teslaclubwi.com/

EVsafe.org EV training for first responders located in WI. https://evsafe.org/ (262) 506-4994

Energy Security Agency Provides 24hr identification and handling instructions for electric vehicles. https://energysecurityagency.com/erg/(855) 372-7233