

## Annex

Some of the test scenarios which AVs can be put through at the Centre include:

- **Traffic lights**  
To simulate commonly-found traffic schemes on Singapore roads, two fully-functioning traffic light systems have been installed at a Cross-Junction and T-Junction within the circuit to test AVs' capability to detect traffic signals and navigate safely across traffic intersections.
- **Dedicated short-range communication (DSRC) beacons**  
Forming nodes in a communication network, AVs and roadside elements such as traffic lights will provide each other with information, such as safety warnings and traffic information. These nodes are known as dedicated short-range communications (DSRC) beacons, which help enhance AVs' navigate with precision.
- **Rain Simulator**  
Provided and operated by ST Kinetics, the rain simulator will test the navigation abilities of AVs and their on-board sensors through varying rain intensities, which simulates tropical climate conditions.
- **Flood Simulator**  
A partially submerged area to assess AVs response upon encountering floods and their ability to safely navigate out of them.
- **Urban Canyon**  
Freight containers are stacked to stimulate areas with high-rise buildings, to evaluation AVs ability to navigate when there are intermittent loss of Global Navigation Satellite System (GNSS) signals.
- **Crank Course and S-Course**  
To test AVs' ability to manoeuvre sharp curves without striking or mounting the kerb.
- **Road hump and slope**  
To test AVs' capability to detect a road humps and the gradient of a slope, and slow down safely.
- **Bus stops (with and without bus bays)**  
To test AV buses capability to enter/exit bus bays and pick up/drop off passengers, amidst traffic flow.



- ① Bus stop with bay
- ② Rain simulator
- ③ Slope
- ④ Signalled intersection
- ⑤ S-course

- ⑥ Signalled intersection
- ⑦ V2X communication
- ⑧ Charging station for vehicle and Autonomous Vehicle Monitoring and Evaluation System (OLIVE)

- ⑨ Urban canyon
- ⑩ Pedestrian crossing
- ⑪ Crank course
- ⑫ Bus stop
- ⑬ Flash flood area