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Emerging Technology

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SUBJECT: Newport Transportation System Plan Update
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Emerging transportation technologies will shape roads, communities, and daily lives for generations. Vehicles are becoming more connected, automated, shared, and electric. While the timing of when these advances will occur is uncertain, they will have significant impacts on how a community plans, designs, builds, and uses the transportation system. Below are some important emerging transportation technology terms and definitions.

- **Connected vehicles (CVs)** will enable communications between vehicles, infrastructure, and other road users. This means that vehicles will be able to assist human drivers and prevent crashes while making the system operate more smoothly.
- **Automated vehicles (AVs)** will, to varying degrees, take over driving functions and allow travelers to focus their attention on other matters. Vehicles with combined automated functions like lane keeping and adaptive cruise control exist today. In the future, more sophisticated sensing and programming technology will allow vehicles to operate with little to no operator oversight.
- **Shared vehicles (SVs)** allow ride-hailing companies to offer customers access to vehicles through cell phone applications. Ride-hailing applications give on-demand transportation with comparable convenience to car ownership without the hassle of maintenance and parking. Examples of shared vehicles include companies like Uber and Lyft.
- **Electric Vehicles (EVs)** have been on the road for decades and are becoming more economically feasible as the production costs of batteries decline and vehicle fuel prices increase.

Many of these technologies will not be exclusive of the others and it is important to think of the host of implications that arise from the combination of them. These vehicles are referred to as connected, automated, shared, and electric (CASE) vehicles.