Vehicles that are connected to each other and roadside infrastructure, through wireless communication, are becoming more common and automated vehicles are not far behind. Connected / automated vehicle strategies prepare the Turnpike for the roadway of the future in the application areas of safety, work zones, traffic incident management, weather management, freight and tolling. The Turnpike plans to equip a portion of its vehicle fleet with connected technology.

The Connected Vehicle Roadmap outlines objectives for the TOP Program, defines institutional requirements (infrastructure and resources), aligns with joint strategic planning efforts with PennDOT, and defines future projects. The Roadmap identifies safety, work zones, traffic incident management, weather management, freight and tolling as priority application areas. Currently proposed applications prioritize the following uses:

**Safety** - Warn motorists of isolated safety needs, such as sharp curves and ramps.
**Work Zones** - Warn of lane restrictions and backlogs, warn of mobile and maintenance patterns, and share queue, delay and incident information.

**Traffic Incident Management** - Warn drivers of lane closures and reduced speeds when approaching incident zones, warn on-scene responders of vehicles approaching the incident zone at speeds or in lanes that pose a high risk to their safety.

**Weather Management** - Issue alerts and advisories, provide road weather information to assist in adjusting posted speed limits, and connect snowplows to provide weather and location data.

**Freight** - Notify of truck parking availability, warn of oversize restrictions, warn of winter restrictions

**Tolling** - Implement efficient tolling strategies utilizing connected vehicles technologies

The Connected Vehicle Roadmap outlines the Turnpike’s core strategies for deployment and addresses the impacts on the agencies’ daily business practices. The Roadmap suggests areas for pilot projects along the Turnpikes system.

Together, the Turnpike and PennDOT will work on producing a Joint Statewide CAV Strategic Plan identifying areas of need and deployments along strategic roadway, as well as the potential development of a technology spine corridor, which may run from Michigan, through the Commonwealth to Washington, DC. The plan will:

- Develop a Joint Statewide Connected and Automated Vehicle Strategic Plan that will be utilized by both PennDOT, the Pennsylvania Turnpike Commission, and various Metropolitan Planning Commissions (MPOs).
- The plan will identify the steps needed to take to prepare for connected and automated vehicles.
- Define a comprehensive set of focused, reasonable and deployable applications.
- Provide the critical missing data and information pertaining to the early deployment of connected and automated vehicles.
- The Strategic Plan will be used as the foundation for all policy and procedural decisions relating to connected and automated vehicles.