

TRANSPORTATION ACHIEVEMENT AWARD — TSMO

Coachella Valley Association of Governments and ADVANTEC Consulting Engineers for the CV-Sync Regional Traffic Signal Synchronization Smart Region Project



ITE—A Community of Transportation Professionals is pleased to announce that **Coachella Valley Association of Governments (CVAG)** and **ADVANTEC Consulting Engineers** have received a 2024 Transportation Achievement Award in the

Transportation Systems Management and Operations (TSMO) category for the **CV-Sync Regional Traffic Signal Synchronization Smart Region Project**, which has significantly advanced transportation efficiency, safety, and sustainability in the Coachella Valley. The [Transportation Achievement Awards](#) recognize excellence in the advancement of transportation to meet human needs, by entities concerned with transportation, such as governmental agencies, Tribes, legislative bodies, consulting firms, industry partners, and other organizations. Awards are presented in five categories: Complete Streets, TSMO, Safety, Planning, and Traffic Engineering.

Project Scope and Description. The CV-Sync project is a comprehensive initiative aimed at transforming the Coachella Valley into a Smart Region through the implementation of Intelligent Transportation Systems (ITS). This project involves upgrading legacy traffic signal controllers, traffic management systems, and communication networks to provide inter-agency traffic signal synchronization across the region. Phase I of the project, completed in June 2023, spanned three major regional roadways: Highway 111, Ramon Road, and Washington Street.

Application of Innovative Concepts. CV-Sync is a prime example of applying innovative concepts to address transportation challenges. The project features advanced technologies such as connected and automated vehicles (CAV), Big Data analytics, Integrated Corridor Management, and Smart Cities initiatives. The implementation includes a complex network of nine Traffic Operation Centers (TOCs) and one Regional Traffic Management Center (RTMC), equipped with closed-circuit television (CCTV) systems, Bluetooth/Wi-Fi arterial management systems, and enhanced detection systems for vehicles, pedestrians, and cyclists. This innovative approach minimizes the need for extensive roadway construction, focusing instead on leveraging technology to improve traffic flow and safety.

Implementation of a Challenging Transportation Program. The development and implementation of CV-Sync involved overcoming numerous challenges, including coordinating across multiple jurisdictional boundaries and integrating advanced technologies in innovative ways. The project required collaboration among 17 agencies and entities, including local governments, Tribal Nations, and federal and state transportation authorities. The use of a secured fiber optic communications network and advanced traffic signal controllers facilitated real-time traffic management, significantly enhancing the region's transportation infrastructure.

Significant Effect on Transportation. CV-Sync has had a profound impact on transportation in the Coachella Valley. By synchronizing signals across interconnected roadway networks in multiple jurisdictions, the project has reduced traffic congestion, travel delays, and greenhouse gas emissions. The system provides real-time communication between traffic signals, connected vehicles, and traffic management centers, enabling efficient management of traffic flow during regional events and emergencies. The project has also enhanced goods movement and improved the overall quality of life for residents and visitors.

Multi-Faceted Transportation Program. The CV-Sync project is a multi-faceted initiative that combines various innovative and well-applied concepts. It includes the installation of new conduits and fiber optic cables, CCTV cameras, changeable message signs, advanced traffic signal controllers, and video detection systems. These technologies provide real-time traffic surveillance, data collection, and system performance monitoring, enabling agencies to manage traffic effectively and improve mobility along major corridors.

Promoting Major Advances in Efficiency and Economy. By utilizing advanced technology rather than disruptive pavement construction, CV-Sync has achieved significant cost savings and responsible use of public funds. The project's innovative solutions have improved traffic flows, emergency response, and large-scale event management, all while reducing congestion and environmental impact. The secured fiber optic network established by the project will also support future public-private broadband communications, extending benefits to low-income communities and tribal lands.

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Visit [here](#) for more information on ITE's Awards Program. Learn more about the CV-Sync Project [here](#).

