

**Measure C New Technology
Reserve Grant Program
FY 2024-25**



Manning Avenue Adaptive Signal Control Technology Project

August 20, 2024

Project Summary

- Install state of the art Adaptive Signal Control Technology (ASCT) via wireless technology along Manning Avenue between I Street and Buttonwillow Avenue
- Will provide real time monitoring and continuous synchronization of six existing traffic signals
- Project will reduce travel time, reduce greenhouse gas emissions and improve traffic flow

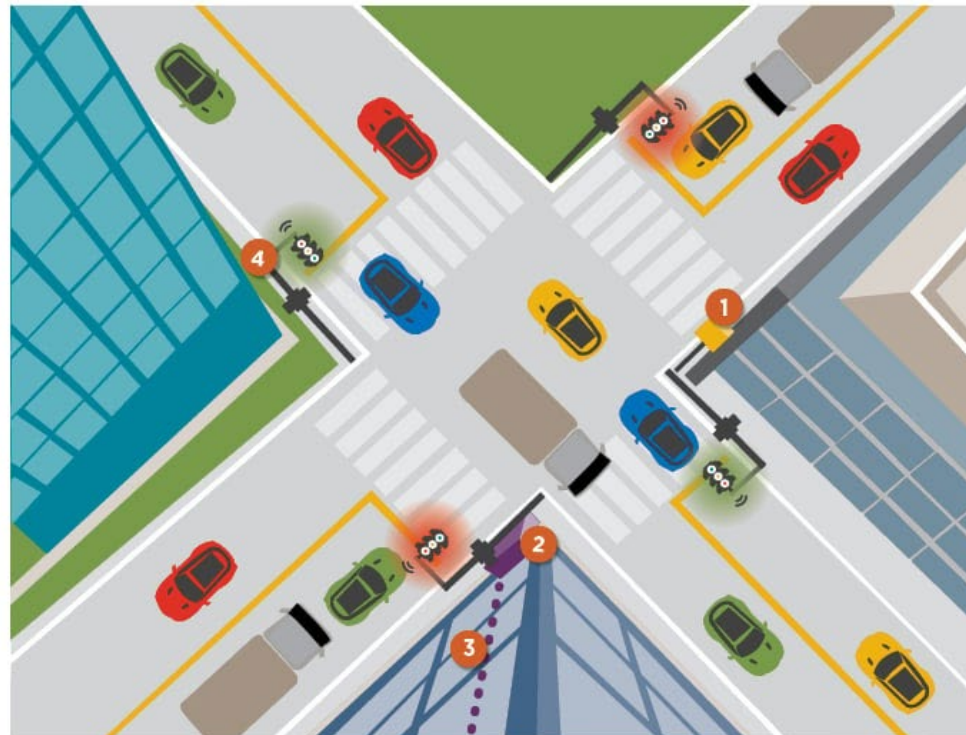
Project Location



- Manning Avenue Intersections:
 - I, Reed, Frankwood, Columbia, North and Buttonwillow

Technology Features

- Wireless technology to synchronize six existing traffic signals
- Real-time traffic condition updates - Traffic signals synchronized based on real-time traffic conditions that will adapt and adjust as traffic flows increase and decrease throughout the day



Typical Adaptive Signal Control Intersection

- 1 Real-time information on levels of traffic congestion provided by detectors
- 2 Traffic congestion levels processed in traffic control cabinet
- 3 Processed traffic information transmitted to cloud server where it provides real-time data for the adaptive system
Continuous time adjustments sent to the traffic control cabinet
- 4 Green time intervals vary based on cloud-based adaptive control system

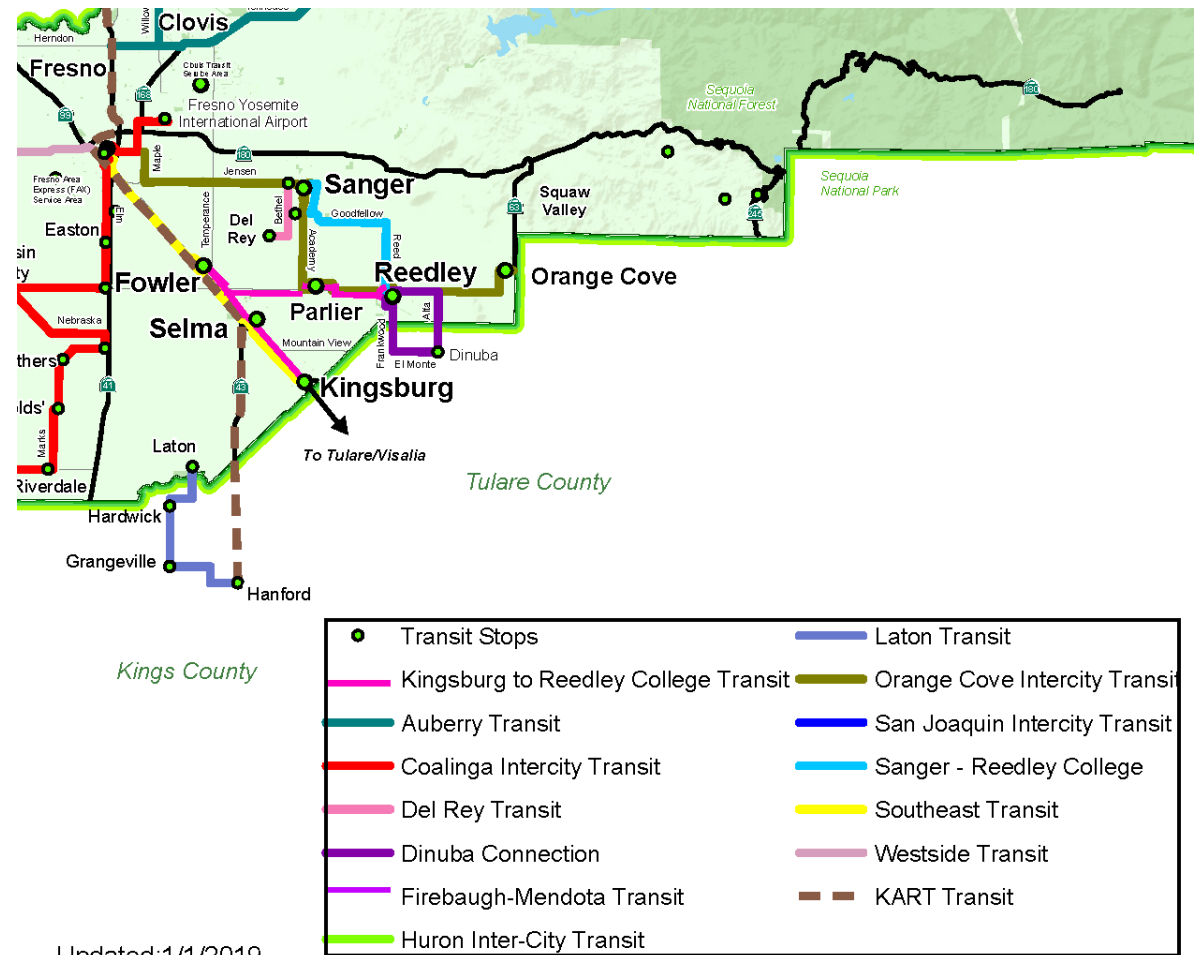
Project Benefits

- Improved traffic flow
- Reduction in travel time
 - Reduction of driver frustration and stress resulting in safer driving experience
- Reduction in Greenhouse Gas Emissions
 - Reduction of vehicle idling, traffic congestion and amount of stops at red lights
 - Reduction of poor air quality and fuel consumption
- Reduction of impact on asphalt due to abrupt braking, resulting in an increased lifespan of roadway



Regional Impact

- Manning Ave is highly traveled by members of surrounding communities including Parlier, Sanger, Orange Cove, Kingsburg, and Dinuba
- Fresno County Rural Transit Agency has various routes that traverse this segment of roadway
- Reedley College, Reedley High School, County of Fresno Department of Social Services, many businesses and restaurants, Hospital and DMV



Performance Measures

- Travel time studies before and after implementation
- Traffic accident data at each intersection before and after implementation
- Synchro study to demonstrate emission reductions before and after implementation
- Number of complaints received regarding traffic signal timing before and after implementation

Thank You



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