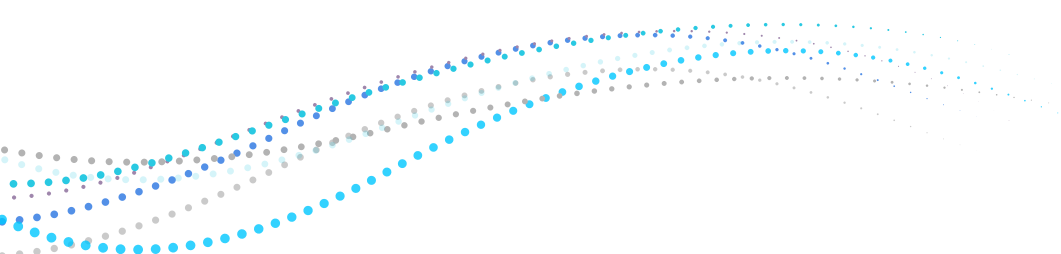


Case Study

Vantage®
Moreno Valley, CA



July, 2016



iteris®

Background

“The best place to do business” is a progressive yet challenging goal for the young City of Moreno Valley. Since it was incorporated as a City in 1984, Moreno Valley has experienced rapid growth and is now a population center in southern California’s Inland Empire with over 200,000 residents. By 2006, the City’s General Plan update acknowledged its location within a jobs poor region, with only 0.31 jobs for every area resident, and undertook the task of correcting this imbalance.

help Moreno Valley respond to traffic on City streets, which has climbed along with the population and job growth. “The TMC gives officials the tools to improve both passenger vehicle and freight traffic flow and reduce air pollution that comes from vehicles backed up for long periods of time,” says Eric Lewis, the City’s Traffic Engineer.

The 2015 California Sustainable Freight Initiative of the California Air Resources Board (CARB) goal to “Improve



By maximizing the value of its regional location to attract logistics and distribution jobs, 13 major distributors are now located in the City. Over three million square feet of additional distribution buildings are under construction, and another seven million square feet is entitled. This progress stemmed from the City’s understanding that effective circulation is critical to Moreno Valley’s continued growth and maintenance of the quality of life.

The City committed to implementation of the Inland Empire ITS Strategic Plan to improve mobility and enhance safety, and Iteris has been an important partner. In the last year the City has built a new Traffic Management Center (TMC) to

freight system efficiency through new technology, and smart logistics and infrastructure investment” has encouraged the City to continue transformation of its legacy transportation infrastructure.

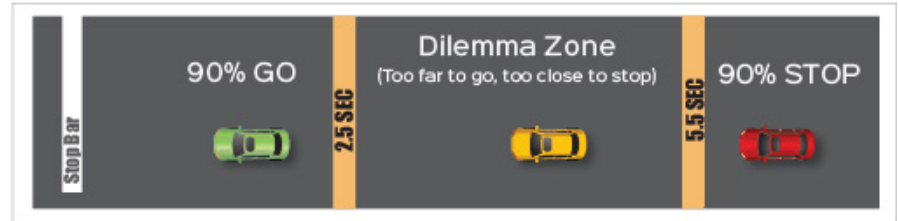
Problem

Moreno Valley has been using inductive loop detection at most traffic signals, and was not satisfied with the detection performance and high cost of maintenance required to keep pace with both loop and pavement deterioration. One of the big issues they were having was vehicles running red lights and causing collisions. This is called the “Dilemma Zone.” The driver is too far from the intersection to go and too close

“The CARB concept of system efficiency through new technology encouraged the City to innovate, and we assessed new technology for advanced traffic signal detection in lieu of maintaining older inductive loops.”

*- Eric Lewis
City Traffic Engineer*

to stop on a yellow light and many times, they “go for it” which is a leading cause of collisions.



In addition to Dilemma Zone detection, the City was very interested in bicycle detection, and more importantly, bicycle differentiation. According to the Office of Traffic Safety 2013 data, bicyclists under age 15 were experiencing higher than expected crash involvement.

Solution

The City began installing video detection from Iteris for stop bar advanced detection and was very pleased with both the detection accuracy and the extra benefit of high-quality video coming back to the TMC.

To assist with the Dilemma Zone issues contributing to crashes in the City, they evaluated the Vantage Vector® Hybrid sensor from Iteris that provides both radar and video detection. The radar detects vehicles traveling over 500 feet from the sensor with very high speed accuracy detection, and the video camera provides stop-bar presence detection. The video camera is an important addition. Now they can view real-time video back at the TMC, providing at-a-glance views of live traffic to assist with other signal timing operations.



Creating a new infrastructure and altering the existing one to accommodate bicycling is an important objective for Moreno Valley. Included with all Iteris video detection is SmartCycle®, the industry's first bicycle differentiator via video detection.



SmartCycle adds more green time for those phases where slower moving bicyclists would be present at the intersection. This enhanced green time would provide a longer phase for bicycles (who are slower than cars) to safely cross the intersection. Another benefit of this timing feature is that the intersection can run more efficiently when vehicles are present and bikes are not, keeping the signal timing for vehicles and only alter the timing when bikes are detected.



The City has implemented special bicycle detection zones at ten intersections and added extension timing for those zones.

The new system also responds to the large segment of Moreno Valley's residents who are interested in cycling for short trips but concerned about their safety. The City has used this feature to comply with California State bicycle timing requirements by providing longer green times when bicycles are present.

Results/Benefits

Moreno Valley is noticing major benefits so far from the Vantage Vector camera installations:

- Ability to view real-time vehicle detection from the TMC
- Ability to modify detection zones in response to the traffic conditions
- The maintenance time that the staff spends in the street exposed to traffic has been greatly reduced
- Less traffic congestion
- No asphalt construction
- With the added benefit of bicycle detection zones, the local cyclists have acknowledged better detection at Intersections, which makes it safer for the bicycle commuters.

“Dilemma Zone enhanced detection helps our local implementation of the US DOT Towards Zero Deaths national strategy, and the opportunity to accurately detect bicycles and provide appropriate signal timing for them will encourage growth in bicycle mode share,” stated Eric Lewis.
