



Metropolitan Transportation Commission (MTC)

Tech Transfer Seminar

Active Traffic Management (ATM) Strategies for Arterials

When:	Wednesday, September 30, 2015, 12:30-4:30 PM
Where:	MTC Auditorium, 101 Eighth Street, Oakland, CA 94607
Cost:	FREE (<i>Registration Required</i>)
Registration Info:	Please register online before 5 PM, Friday, September 25, 2015 by visiting this link: http://mtctechtransferseminar.eventbrite.com
Audience:	Traffic engineers (public & private sectors), transportation planners, program managers, students and others interested in the seminar topics

Active Traffic Management (ATM) includes a set of traffic management and control strategies to dynamically manage congestion based on prevailing and predicted traffic conditions. This seminar will focus on the ATM strategies for arterials. Following an overview, several ATM strategies for arterials will be explored in detail, including bicycle and pedestrian detection and operations at intersections, adaptive signal control systems, active parking management, and the arterial operations component under the I-80 Integrated Corridor Mobility (ICM) project. A brief description of each topic is provided below. The agenda for this seminar is shown on the last page.

1. State of the Practice: Active Traffic Management for Arterials

This presentation provides an overview of the National Cooperative Highway Research Program (NCHRP) Synthesis 447, which documents the state of the practice associated with designing, implementing, and operating ATM on arterials. Of particular interest to this study was strategies used to actively manage traffic and congestion on arterials; situations and operating conditions in which ATM strategies have been successfully and unsuccessfully deployed on arterials; and system and technology requirements associated with implementing the strategies. Of secondary interest to this study was information on institutional issues associated with implementing ATM for arterials; maintenance and operations requirements associated with implementing these strategies; and the benefits and costs associated with implementing these strategies.

Speaker: **Aaron Elias** (Kittelson & Associates, Inc.)

2. Bicycle Detection and Differentiation at Signalized Intersections

Signal timing that is set correctly for cars is often deficient for bicyclists. California passed AB 1581 several years ago, requiring bicycle detection at new or upgraded intersections. This requirement has greatly altered how the detection industry, and engineers, view bicyclists at intersections. This presentation will describe the various detection methods that are currently used to differentiate bicycles from vehicles in mixed flow conditions at intersections. By differentiating bicycles, special signal timings can be applied to increase green time for those

bicyclists when present, allowing them more time to cross the intersection, and improving safety. Several local agency examples will be presented, including operational usage and lessons learned.

Speakers: **Mike Montoya** (Iteris, Inc.); **Jaime Rodriguez** (City of Palo Alto)

3. Sensors and Safety Measures for Pedestrians in Crosswalks

A micro-radar sensor that can detect pedestrians has been deployed at a crosswalk test site in Danville, CA. This presentation will describe the micro-radar sensor technology and its performance in detecting and differentiating between pedestrians and vehicles in the crosswalk. Potential safety applications based on field measurements have been evaluated and will be presented. Next steps to enhancing pedestrian detection and improving safety will also be discussed.

Speaker: **Christopher Flores** (Sensys Networks, Inc.)

4. Adaptive Signal Control – How Does It Work?

While adaptive signal control is a well-accepted active traffic management strategy for arterials in many countries, it is still considered a nascent technology in the USA. There is an increasing number of adaptive traffic signal offerings from vendors across the country, some being self-contained systems offered by specialist companies, others being additions to traditional central signal systems. Some adaptive installations have shown outstanding benefits, while many have yielded mediocre results and left agencies with disappointed expectations. This presentation will describe the various types of adaptive systems; explain their underlying principles, capabilities and limitations; explain how to identify and clearly define your needs, objectives and requirements for adaptive control of an arterial; and describe the various methods of procurement that are suitable for purchasing an adaptive signal system. This presentation will also discuss appropriate methods for evaluating adaptive signal performance, and how to critically review vendors' claims.

Speaker: **Kevin Fehon** (DKS Associates)

5. SFpark: Circle Less, Live More

SFpark was a federally-funded, internationally-recognized demonstration of a new approach to managing parking, using better information (including real-time data to monitor and communicate parking availability), customer-oriented wayfinding and service branding, and demand-responsive parking pricing to help make parking easier to find and street operations safer and more efficient. The SFpark project collected an unprecedented library of data to enable a thorough evaluation of its effectiveness; harnessing that data, the San Francisco Municipal Transportation Agency (SFMTA) evaluated the SFpark pilot project to see how effectively this approach to managing parking delivered the expected benefits. Find out how the pilot was carried out, what the SFMTA learned from the pilot, and what's next for SFpark and San Francisco.

Speaker: **Andy Thornley** (San Francisco Municipal Transportation Agency)

6. I-80 ICM: I Got Off the Freeway, Now What?

The I-80 Integrated Corridor Mobility (ICM) project consists of several different traffic management elements on the freeway and adjacent arterials that are integrated into a seamless system for managing congestion. These elements include Lane Use Signs, Variable Speed Signs, Variable Message Signs, and Adaptive Ramp Metering on the freeway; and Trailblazer Signs, CCTV cameras, and traffic signal modifications on the arterials. This presentation focuses on the arterial aspects of the project and how these elements will provide incident management tools on surface streets and benefit the overall transportation network.

Speaker: **Randy Durrenberger & Brian Sowers** (Kimley-Horn & Associates, Inc.)



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AGENDA

<i>12:30 – 1:00 PM</i>	<i>Check-in & Social Time</i>
1:00 – 1:10 PM	Welcome
1:10 – 1:35 PM	I. State of the Practice: Active Traffic Management for Arterials (Aaron Elias, <i>Kittelson & Associates, Inc.</i>)
1:35 – 2:00 PM	II. Bicycle Detection and Differentiation at Signalized Intersections (Mike Montoya, <i>Iteris, Inc.</i> ; Jaime Rodriguez, <i>City of Palo Alto</i>)
2:00 – 2:25 PM	III. Sensors and Safety Measures for Pedestrians in Crosswalks (Christopher Flores, <i>Sensys Networks, Inc.</i>)
<i>2:25 – 2:40 PM</i>	<i>Q&A</i>
<i>2:40 – 2:55 PM</i>	<i>Break</i>
2:55 – 3:20 PM	IV. Adaptive Signal Control – How Does It Work? (Kevin Fehon, <i>DKS Associates</i>)
3:20 – 3:45 PM	V. SFpark: Circle Less, Live More (Andy Thornley, <i>SFMTA</i>)
3:45 – 4:10 PM	VI. I-80 ICM: I Got Off the Freeway, Now What? (Randy Durrenberger & Brian Sowers, <i>Kimley-Horn & Associates, Inc.</i>)
<i>4:10 – 4:30 PM</i>	<i>Q&A</i>
