



Metro



Connected Corridors I-210 Pilot Project

**CHP/Coroner
Presentation**

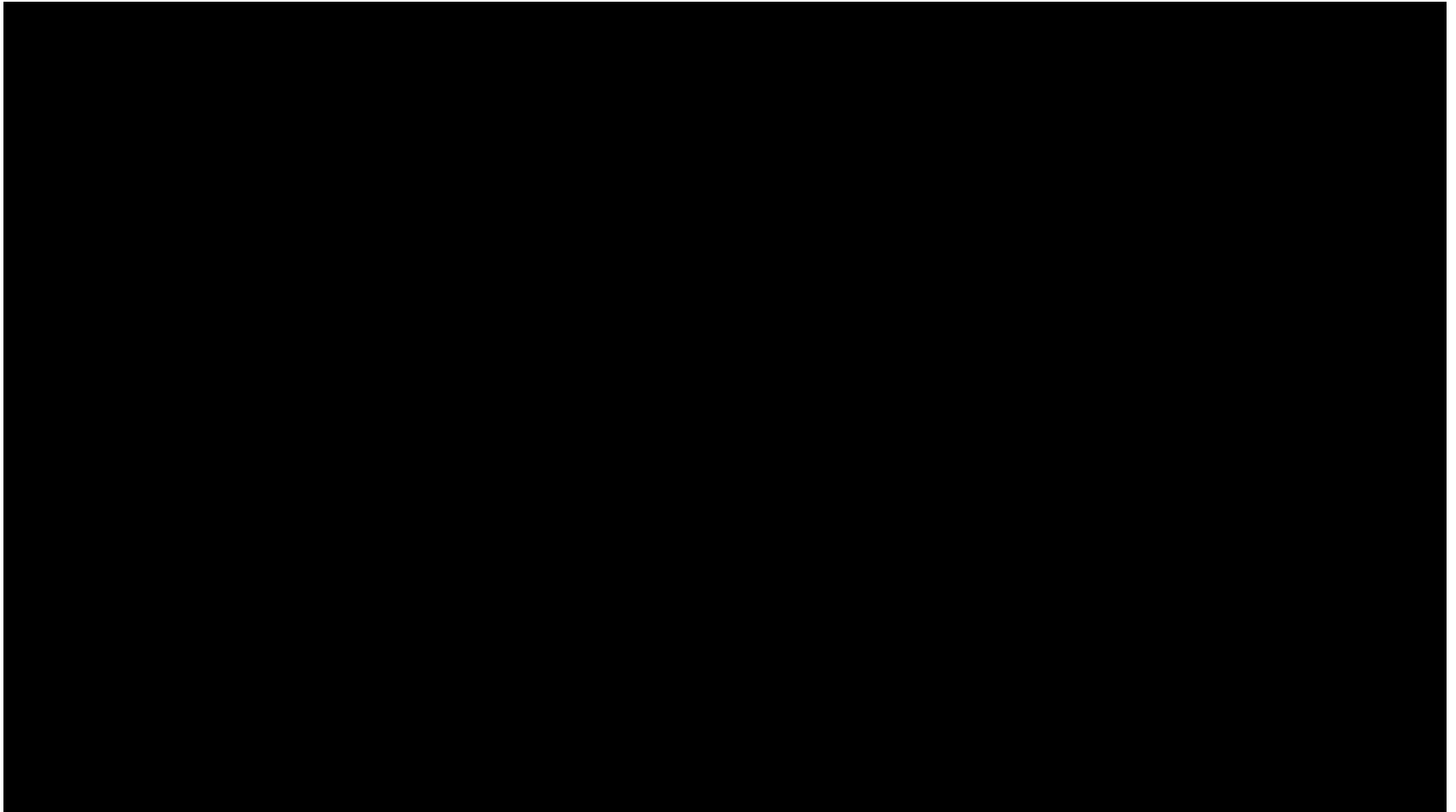


June 3, 2014

E/B Rte 210 / Metro Track Incident

April 21, 2014

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Current Road Network Operations

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- **Transportation Infrastructure Not Fully Utilized**

With teamwork more can be accomplished.

- **Traveler Information Needs Upgrading**

Traffic information is can be fragmented, not very timely or not available at all when you need it most.

- **Networks Are Independently Operated**

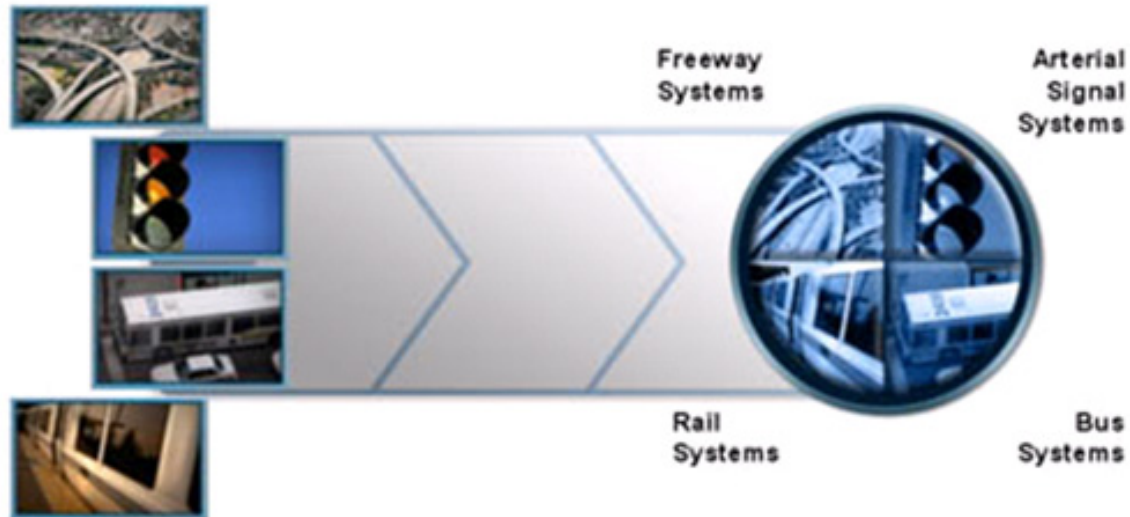
Previous efforts to "reduce congestion" have focused on improving individual networks.



Integrated Corridor Management (ICM)

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- ICM is an approach to improve mobility by integrating various networks together, so that partner agencies can manage the transportation corridor as a unified multi-modal system.



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- Phase 1**
- Legend:
- Freeway
 - Freeway Interchange
 - Arterial
- Not to scale
- Map labels include: Fair Oaks Ave, Marengo Ave, Los Robles, Lake Ave, Hill Ave, Allen Ave, Altadena Ave, San Gabriel Blvd, Sierra Madre Villa Ave, Michellinda Ave, Colorado Blvd, Colorado St, Colorado Pl, Foothill Blvd, Myrtle Ave, Mountain Ave, Buena Vista St, Huntington Dr, Duarte Rd, Santa Anita Ave, Longden Ave, Live Oaks Ave, Arrow Hwy, Azusa Ave, Route 66 / Alosta Ave, Foothill Blvd, Gladstone St, Grand Ave, Citrus Ave, Lone Hill Ave, Arnelia Ave, San Dimas Ave, San Dimas Canyon Rd, Rosemead Blvd, Sierra Madre Blvd, Huntington Dr, Arroyo Pkwy, Union St, Del Mar Blvd, Walnut St, Orange Grove Blvd, Maple St, Corson St, St John Ave, Pasadena Ave, Green St, 210, 134, 110, 19, 605, 710, 10, 39, 57, 71, 51.

Upcoming Future Improvements

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- **The following improvements will be made to the Route 210 connectors at the 134/710 interchange as part of the upcoming Route 210 pavement rehabilitation project between Dunsmore Ave. in La Crescenta and Los Robles Ave. in Pasadena (Contract No. 28810). This project is scheduled to begin construction this fall**
 - ▣ **EB 210 CONNECTOR TO EB 210**
 - High friction bauxite surface treatment will be installed at the connector to reduce the potential for wet pavement accidents.
 - Broken pavement slabs will be replaced with long-life concrete slabs and grinded to reduce the potential for wet pavement accidents on the Route 210 Freeway mainline within the project limits.
 - The tunnel lighting systems in both tunnels at the EB 210 Connector to EB 210, as well as the tunnel at the WB 210 Connector to SB 710 will be upgraded to provide variable lighting levels depending on the ambient lighting approaching the tunnels. This will be similar to the tunnel lighting systems recently installed at the I-5/SR-2 interchange. The tunnel walls will be repainted and maintenance turnouts will be constructed at each tunnel.

Upcoming Future Improvements (con't)

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- Overhead sign structures and sign panels will be replaced and the sign lighting systems upgraded along the Route 210 Freeway within the project limits.
- Highway lighting systems will be upgraded along the Route 210 Freeway within the project limits.

■ **WB 210 CONNECTOR TO WB 210**

- High friction bauxite surface treatment will be installed at the connector to reduce the potential for wet pavement accidents.
- Knocked down and blacked out highway lighting systems at the WB 210 Connector to WB 210 to Electrical Maintenance. Office of Traffic Engineering will investigate Sgt. Jones' recommendation to install additional warning signs at the WB 210 Connector to WB 210.

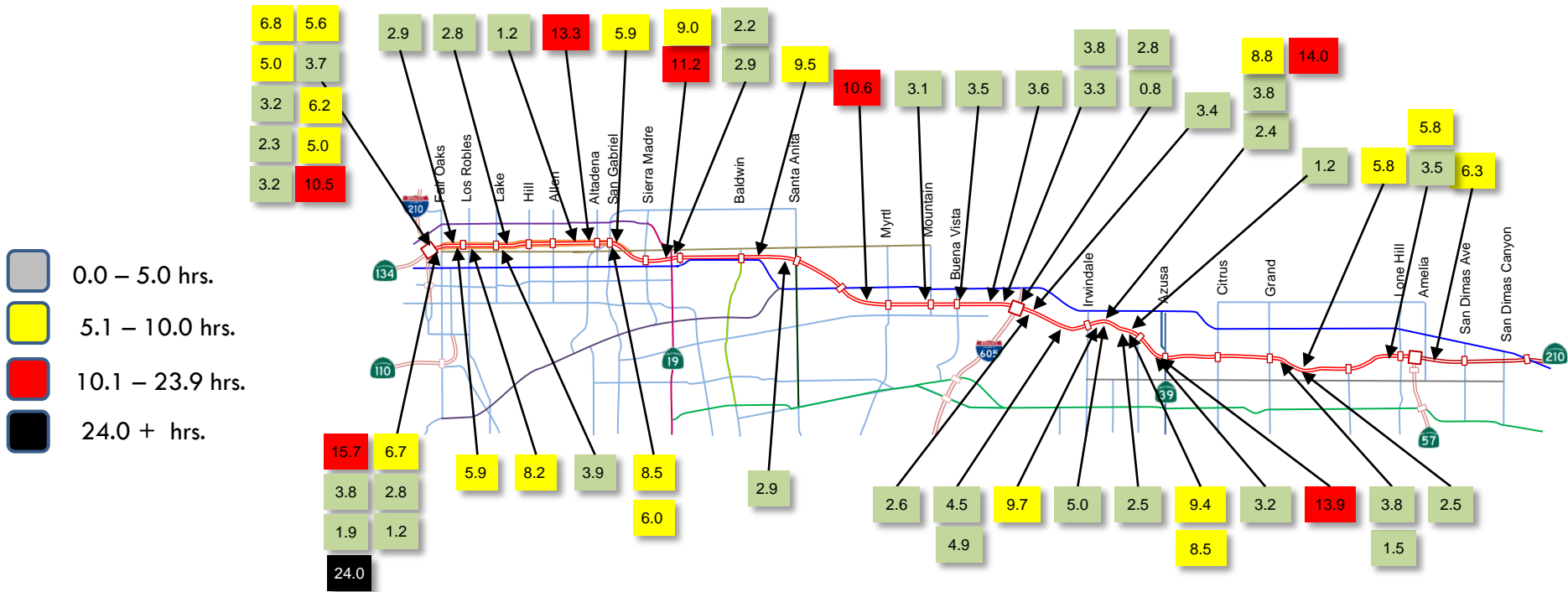
General Incident Facts & Traffic Incident Mgmt (TIM)

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- *In all of the US it is estimated that incidents cause*
 - ▣ *1 billion hours of traveler delay.*
 - ▣ *\$22 billion in delay costs.*
 - ▣ *700 million gallon of fuel wasted.*
- *What can we CT/CHP/Coroner do to strengthen the principals of TIM with Connected Corridors and ICM in general?*
 - ▣ *More frequency of TIM Training?*
 - ▣ *More frequent dialog between CHP and Caltrans Ops/Maint/Area Command?*
 - ▣ *Proposing a Law Enforcement User Needs Workshop for Connected Corridors.*

Major Incidents on I-210 (2009 – 2013)

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- In 2013 a total of approximately 6,000 incidents were reported within the project limits. (500 per month)

November 21, 2013 Incident on the I-210

E210 to E210 Tunnel Accident

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November 21, 2013 Incident on the I-210 E210 @ Sierra Madre

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Why ICM and I-210 Corridor

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- **By integrating networks and managing together, we can:**
 - ▣ Improve communications and coordination.
 - ▣ Allow for proactive, joint, multimodal management of assets.
 - Freeway – Arterial – Transit – Parking
 - ▣ Be working together get the most out of our existing systems.

- **Benefits to all Cities along the Corridor**
 - ▣ Move traffic more efficiently.
 - ▣ Help traffic that gets off the freeway get around the accident/incident easier.
 - ▣ Coordinate Caltrans on-ramps and city arterial signals to keep everybody moving.

Sky 2

DEVELOPING STORY

Big Rig Crash

PASADENA

5:04 74°

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CBS2
@CBS2LA

Other ICM Efforts (United States)

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- Agencies across the country are embracing the ICM approach.

Corridor	Corridor Type	Lead Agency	Deployment
I-15 Diego	Suburban	SANDAG	System launched October 2013 Currently in evaluation phase
US-75 Dallas	Suburban & Urban	DART	System launched in April 2013 Currently in evaluation phase
I-80 Bay Area	Suburban & Urban	MTC	Groundbreaking in October 2012 Expected to be completed Summer 2015
I-95/I-395 Virginia	Rural, Suburban & Urban	Virginia DOT	ConOps development initiated in 2012 Currently under development

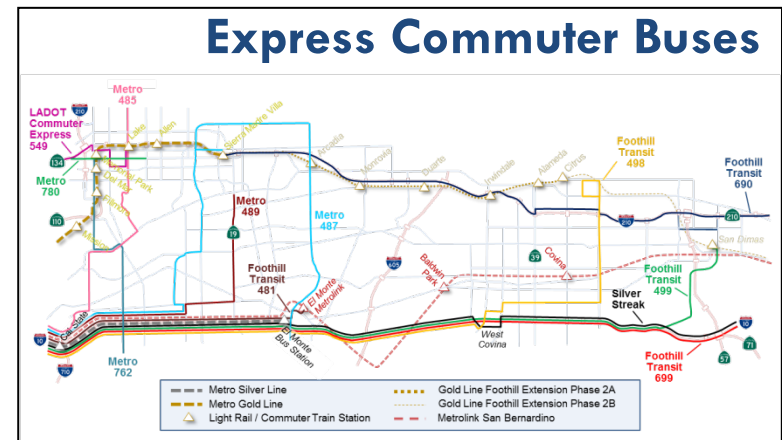
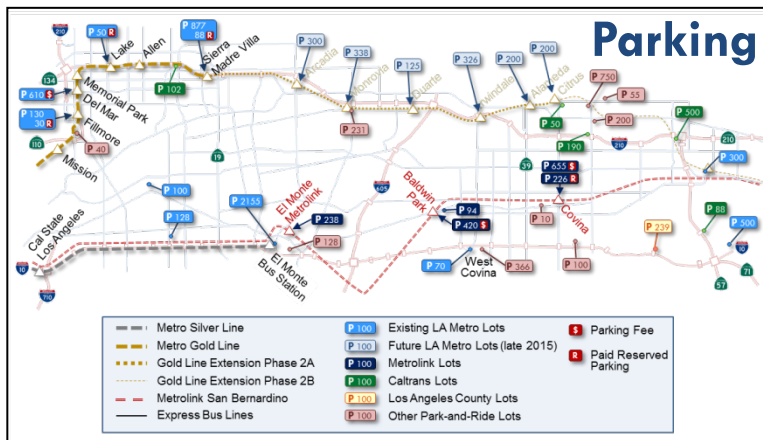
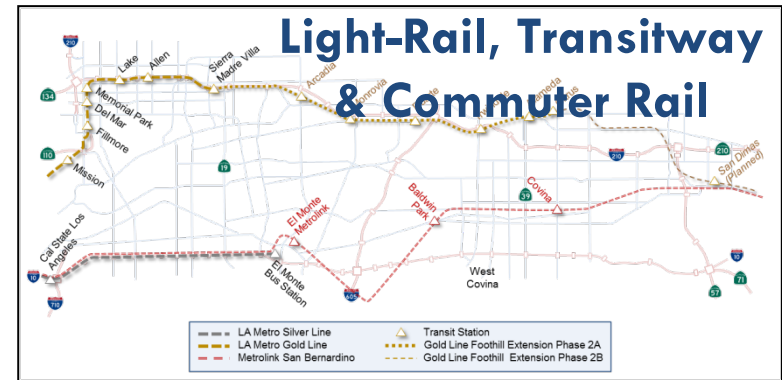
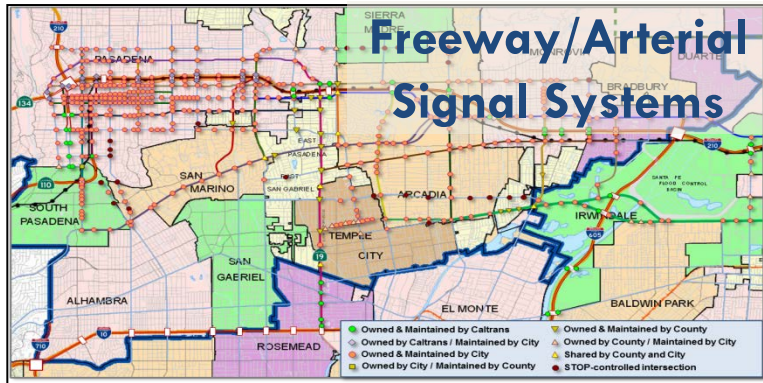
Change is Coming

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- Caltrans is shifting away from building more paved lanes to concentrating on how to better jointly manage our multimodal transportation networks.
- The I-210 “*Connected Corridors Pilot*” is the first *Caltrans-led* ICM effort in California.
- The I-210 Connected Corridor” pilot beginning in the City of Pasadena will be the first corridor site in the “ICM California” plan.
- The plan calls for 50 corridors in California over the next ten years.

I-210 Project Corridor Assets

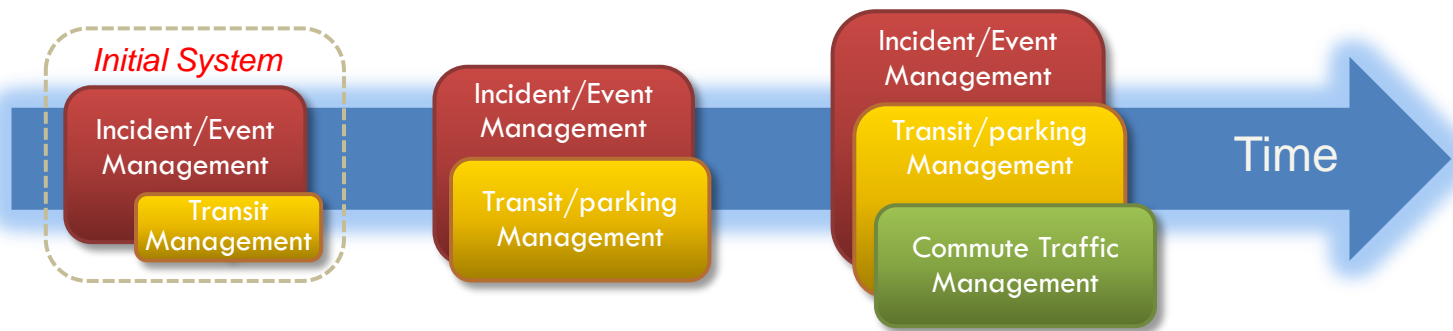
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I-210 Pilot Project Goals and Objectives

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- Initial focus is on managing incidents/events, with gradual expansion to demand management and commute congestion



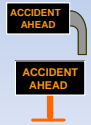
- Develop a pilot system that can be replicated on other corridors and be a model for other corridors in the state and country

Transit & Parking Management Example

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Operational Scenario



Freeway CMS

DMS/Trailblazer



Adjust Upstream Ramp Meter



Adjust Downstream Ramp Meter



Adjust Signal Timing



Activate HAR



I-210 Pilot Project (Summary)

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- Partner agencies can still manage their networks individually, but work together when needed to manage the corridor as a unified multi-modal system, combining advanced technologies with innovative practices.

