

# smart corridor

INTERSTATE 80  
INTEGRATED CORRIDOR MOBILITY

December 13, 2019

## I-80 Corridor Update



CONTRA COSTA  
transportation  
authority



# Agenda

- I-80 Smart Corridor Update
- Managed (HOV) Lane Update
- Upcoming Initiatives and Projects on I-80





# I-80 Smart Corridor Overview



## What is the I-80 Smart Corridor?

Implementation of operational strategies and technologies to improve mobility, safety and interagency communications.

- Adaptive Ramp Metering
- Active Traffic Management
- Transit Signal Priority
- Traffic Signal Coordination
- Incident Management
- Traffic Data Sharing
- Enhanced Traveler Information



# I-80 Smart Corridor Update

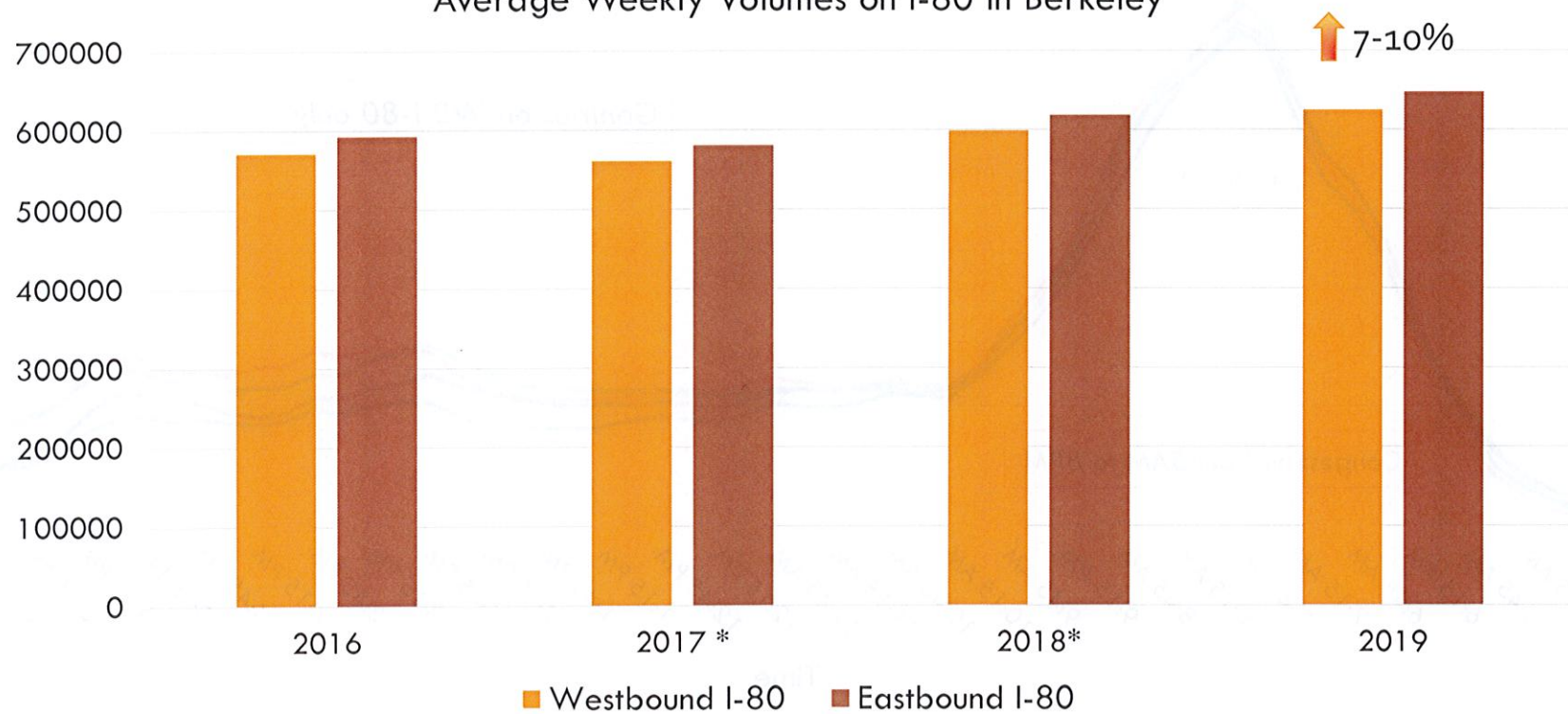
- Caltrans proactively operating, monitoring & fine-tuning
- Total Activations of System: 1141\*
  - WB I-80: 836
  - EB I-80: 305
  - Overhead Signs (WB): 523
- After Study (2014 – 2017)
  - Demand
  - Mobility
  - Safety
  - Bottlenecks



\* As of 7/31/2019

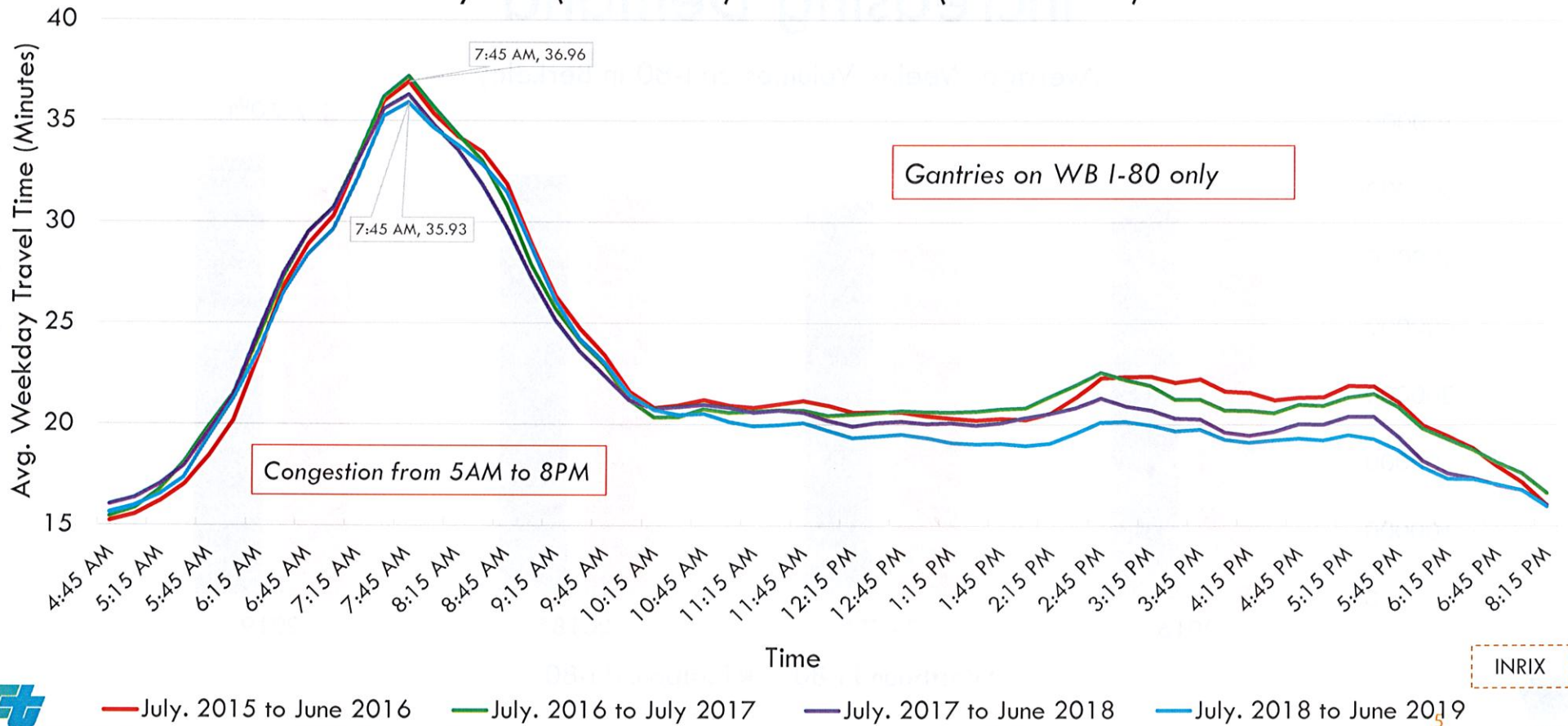
# Increasing Demand

Average Weekly Volumes on I-80 in Berkeley





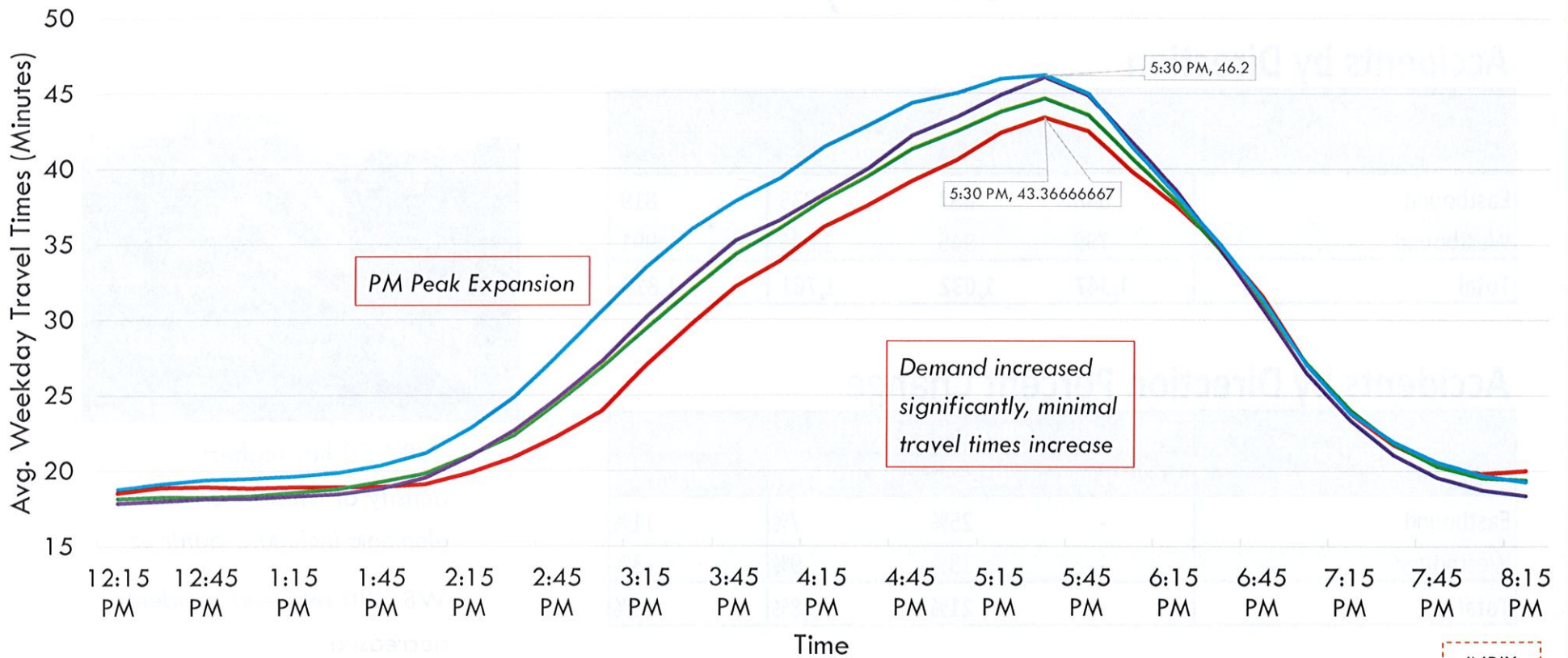
# Travel Time Improvements on WB I-80 Emeryville (Powell St.) to Crockett (Pomona St.)



July. 2015 to June 2016    July. 2016 to July 2017    July. 2017 to June 2018    July. 2018 to June 2019

# Mitigation of Growing Demand on EB I-80

## Emeryville (Powell St.) to Crockett (Pomona St.)



— July. 2015 to June 2016   
 — July. 2016 to July 2017   
 — July. 2017 to June 2018   
 — July. 2018 to June 2019

INRIX



# Safety Benefits

## Accidents by Direction

Direction	Before			After
	2014	2015	2016	2017
Eastbound	548	687	735	819
Westbound	799	945	1,026	991
<b>Total</b>	<b>1,347</b>	<b>1,632</b>	<b>1,761</b>	<b>1,810</b>

## Accidents by Direction Percent Change

Direction	Before			After
	2014	2015	2016	2017
Eastbound	-	25%	7%	11%
Westbound	-	18%	9%	-3%
<b>Total</b>	-	<b>21%</b>	<b>8%</b>	<b>3%</b>

All Highways and Freeways in Alameda and Contra Costa Counties:

 Collisions increased an average of 12 percent between 2014 and 2017



- WB I-80 has highest density of Smart Corridor elements including gantries
- WB I-80 rear-end accidents decreased



# Improving Bottlenecks

- # of Bottlenecks Unchanged
- Examples of Bottlenecks Locations:
  - WB I-80:
    - Bay Bridge Toll Plaza
    - “Maze”
    - I-580 Merge
  - EB I-80:
    - Gilman to I-580 Interchange
    - San Pablo Dam Rd
    - Pinole Valley Rd
- Improved throughput through bottlenecks
  - Freeway is more productive





# Committed to the Corridor

Where Can We Help?

- **Daily Activities**

- Monitor CCTV, vehicle detectors and Smart Corridor systems
- Investigate complaints
- Timing adjustments

- **Weekly Activities**

- Review performance measures
- Coordination with Construction

- **Quarterly or Monthly Activities**

- I-80 Technical Advisory Committee and Management Updates

- **Dedicated Corridor Manager and Team**

- 6:00am to 6:00pm engineer staffing



Transportation Management Center



# Summary

- **Improved Mobility and Safety**
  - Corridor performance would have been worse without Smart Corridor
  - Freeway was more productive
  - WB I-80 saw most improvements
- **Proof of Concept For the Future**
  - Active Traffic Management
  - Innovative Traveler Information
  - Coordinated Incident Management
  - Adaptive Ramp Metering
  - Regional Data Sharing



# Managed Lane Update

- Caltrans Monitors Managed Lane and HOV Performance
  - Annual Report
  - Consults with FHWA
  - Data Collection Challenge:
    - Labor intensive process with Caltrans and Consultant teams
      - Human Factors
        - Tinted Windows
        - Children
        - Viewing Angles
      - Evaluating automation technologies
  - Display HOV Symbol on Lane Use Signs During Operating Hours (WB Only)
    - 1 Year Pilot Starting Fall 2019
  - Enhanced Enforcement





# Enhanced Enforcement Update

- Ongoing Partnership with MTC and CHP
- MTC allocated additional \$600,000 of funds for enforcement in FY19/20
  - \$1.8 million total through June 30, 2020.
  - Approximately \$1.1 million available July 1, 2019 and beyond
- FY 18/19 Statistics:
  - 11,800 enforcement contacts
  - 80% were for HOV occupancy citations or warnings
  - 7900+ Citations Issued
  - 1400+ Warnings
- Analysis ongoing

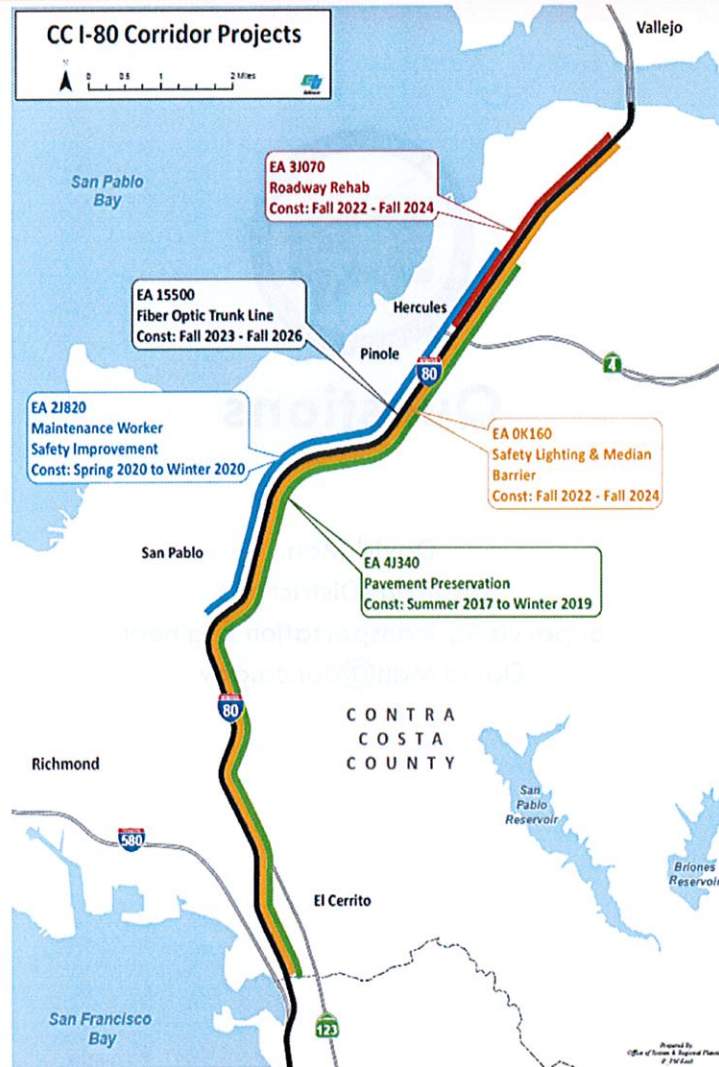
# Upcoming Projects and Initiatives

- Collaboration with Regional Partners and MTC
  - SF-Oakland Bay Bridge Metering Lights Upgrade
    - “Smart” Adaptive System
  - Bay Bridge Forward
    - Improve Transit Access
    - Commuter Parking at I-80 / Buchanan
      - Opening Spring 2020
  - Port of Oakland: GoPort Freight
- Adaptive Traffic Signal System Deployments
- Implementation of Variable Advisory Speeds on I-80
- New Technology Pilots





# Planned Caltrans Projects in Contra Costa County





## Questions

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