



# Developing Transit Performance Measures for Integrated Multi-Modal Corridor Management

December 17, 2010

# Agenda

- Introduction
- Background
- Best Practices
- Group Discussion
- Next Steps and Conclusion





# Introduction

# Why are you here?

- Need your expertise and knowledge of transit
- Build on existing agency measures
- Improve mobility and safety along specific corridors in District 3



# What is the end result of today?

- Identify 1-2 Transit Performance Measures for select District 3 corridors that will be used to:
  - Help determine if mobility on a corridor is improving
  - Identify system operational strategies that can support transit performance
  - Identify capital improvements that can support transit mobility
  - Identify new funding partnerships and opportunities

# What will agencies get out of this?



- Identify opportunities for:
  - Project coordination
  - Funding partnerships
- Performance measurements that:
  - Meet agency needs
  - Are comparable across corridors in the District
  - Demonstrate agency collaboration to improve mobility





# Project Timeline

Project Initiation	September 2010
Research Best Practices	October 2010
Stakeholder Interviews	November 2010
Working Group Sessions	December 2010
Draft Performance Measures	December 2010
Review, Distribute and Receive Comments on Performance Measures	January 2011
Finalize Performance Measures	February 2011



# Background

## Corridor System Management Plans (CSMPs)

# Existing Conditions on State Highways



- Congestion/delay on high demand travel corridors
- Limited funding and capacity options

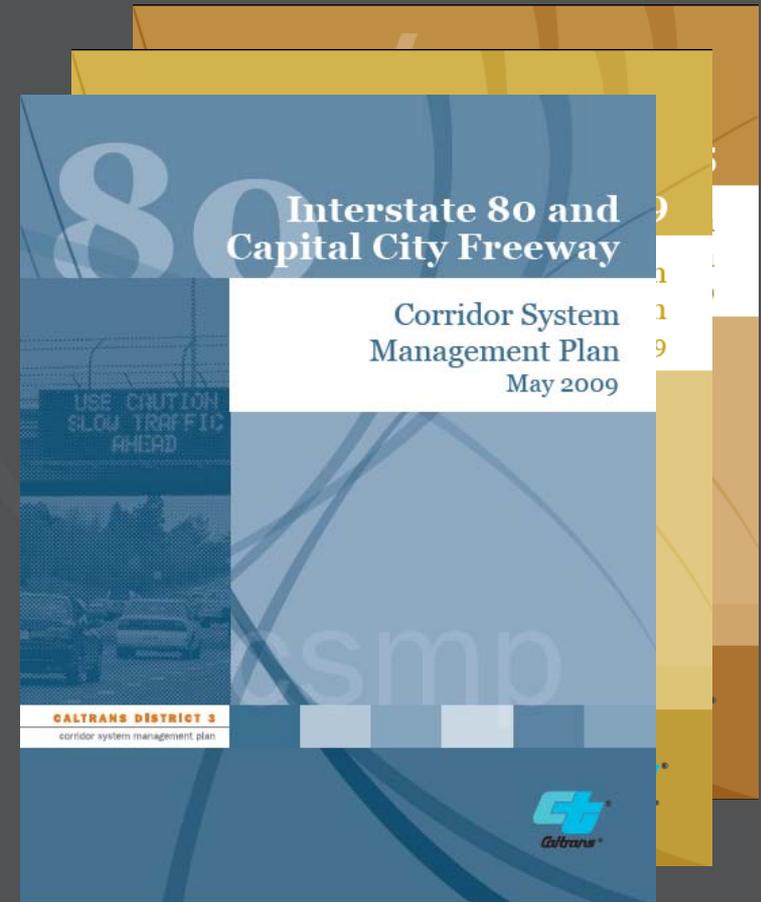


# Response: Corridor System Management Plans (CSMP)

- Purpose
  - Integrated multi-modal corridor management across jurisdictions.
- Contents
  - Goals
  - Strategies
  - Performance Measures
- Definition of a Corridor
  - Transportation network along an identified State Highway

# First Generation of CSMPs

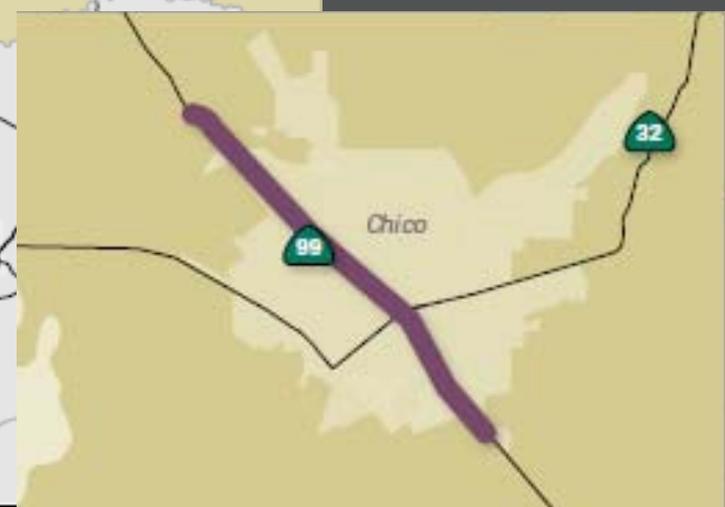
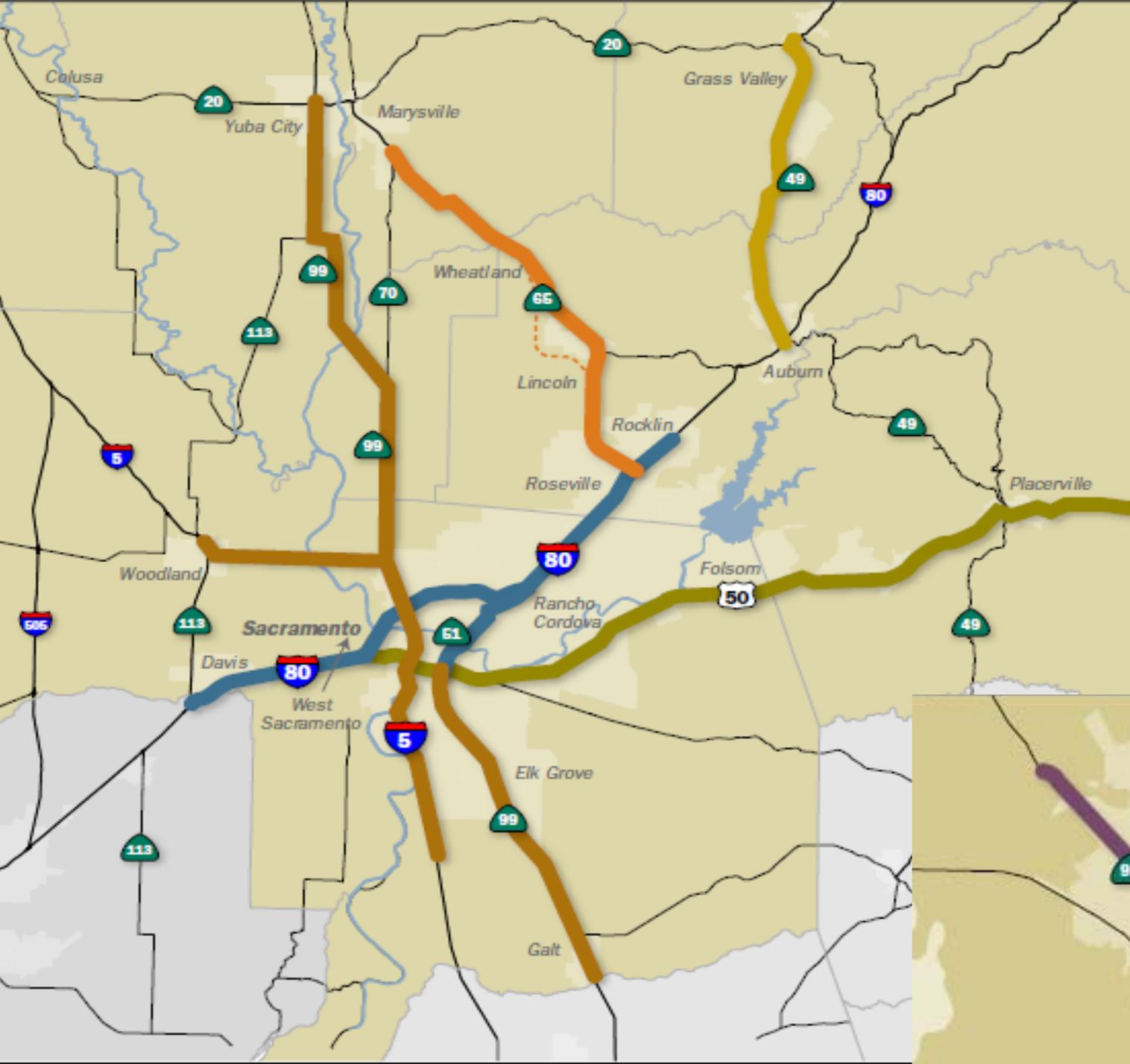
- Completed in 2009
- Performance measures focused on vehicular travel
  - Lack of performance data for other transportation modes
  - Today - committed to improving corridor mobility for all modes



# District 3 CSMPs



<b>Interstate 80</b>	I-80 between SR 113 and Sierra College Boulevard SR 51 between HWY 50/SR 99 and I-80
<b>Highway 50</b>	Between I-80 and east of Camino
<b>Interstate 5 &amp; State Route 99</b>	I-5 between Hood-Franklin Rd. and SR 113 SR 99 between San Joaquin County Line and HWY 50 SR 99 between I-5 and SR 20
<b>State Route 99 North</b>	Between Southgate and Esplanade (in Chico area)
<b>State Route 49</b>	Between I-80 and SR 20
<b>State Route 65</b>	Between I-80 and SR 70



# Existing CSMP Performance Measures



- State Highways Vehicular Travel
  - LOS
  - Total Vehicle Hours of Delay
  - Total Person Minutes of Delay
  - Minutes of Delay per Vehicle
  - Minutes of Delay per Person
  - Vehicle Travel Time (Minutes)
  - Distressed Pavement
  - Reported Collision Rate
  - Reliability
  - Productivity
  - Available Capacity





## **Example:** **Existing CSMP Performance Measure**

Total Vehicle Hours of Delay (*per day at peak congestion*)

- How is it used?
  - Determines the cost (in time) which congestion adds to regular travel time on a road segment
  - Quantifies the performance of a particular roadway in an understandable format.
- What is the data source?
  - 2007 HICOMP report, SACMET Travel Demand ModelPeMSs traffic data, and Caltrans District 3 Traffic Operations Probe vehicle Tach.runs

# Workshop Objective

- Identify 1-2 transit performance measures
- Determine data and reporting needs for performance measures





# Best Practices

# Best Practices – Guiding Principles



- Link to organizational goals
- Clear, reliable and credible
- Variety of measures
- Reasonable number and level of detail
- Flexible
- Realistic



# Best Practices and Key Themes

- Research and discussions with RTPAs and SACOG Transit Coordinating Committee
  - Ridership
  - Availability and Accessibility
  - Reliability
  - Safety
  - Cost Effectiveness



# Best Practices – Case Studies

- City of Folsom
- Sacramento Regional Transit
- Metropolitan Transportation Commission (MTC)
- California's Capitol Corridor
- Nationwide Survey

# City of Folsom



- Reliability
  - % of scheduled departures 0-5 minutes late
- Availability and Accessibility
  - % of major activity centers within 1/8 mile of routes
  - % coordinated timed transfers with LRT
- Safety
  - Miles between preventable accidents



# Sacramento Regional Transit



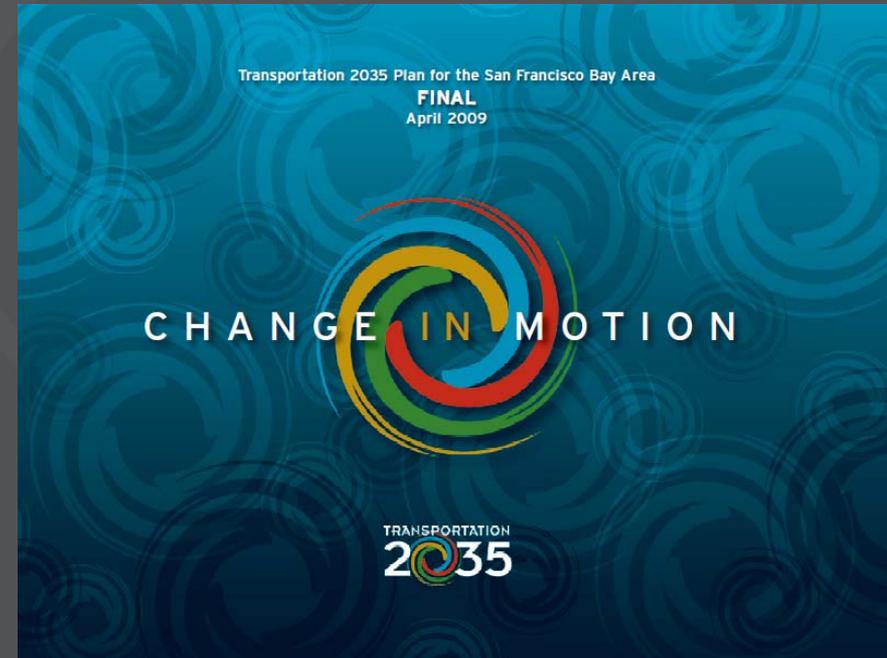
- Ridership
  - Number of passenger trips per million
  - Proportion of people who use transit compared to other modes
- Availability and Accessibility
  - Service within ¼ mile of “high transit need zones”



# Metropolitan Transportation Commission – 2035 Plan



- Reliability
  - Number of recurrent and nonrecurrent delay hours
- Safety
  - Fatal and injury collisions
  - Number of distressed land miles
- Cost Effectiveness
  - Average asset age no more than 50% of useful life



# California Department of Mass Transit



- Ridership
  - Percent of system ridership or mode share
- Availability and Accessibility
  - Physical infrastructure
- Reliability
  - On-time arrival and departure performance
- Cost Effectiveness
  - Financial health



# Nationwide Transit Performance Survey



- Ridership
  - Number of riders
- Availability and Accessibility
  - Weighted average ratio of auto-to-transit travel times
- Reliability
  - On-time performance
- Safety
  - Accident rates
  - Incident reports of vandalism, other crime, and personal safety



# Group Discussion

# Group Discussion

- Ridership
- Availability and Accessibility
- Reliability
- Safety
- Cost Effectiveness
- Other Themes?



# Next Steps and Conclusion

## Next Steps

- Prepare Review Draft Bicycle and Transit Performance Measures
- Solicit input and comments
- Finalize Transit and Bicycle Performance Measures



**Thank you for your participation!**



- For additional information and feedback:
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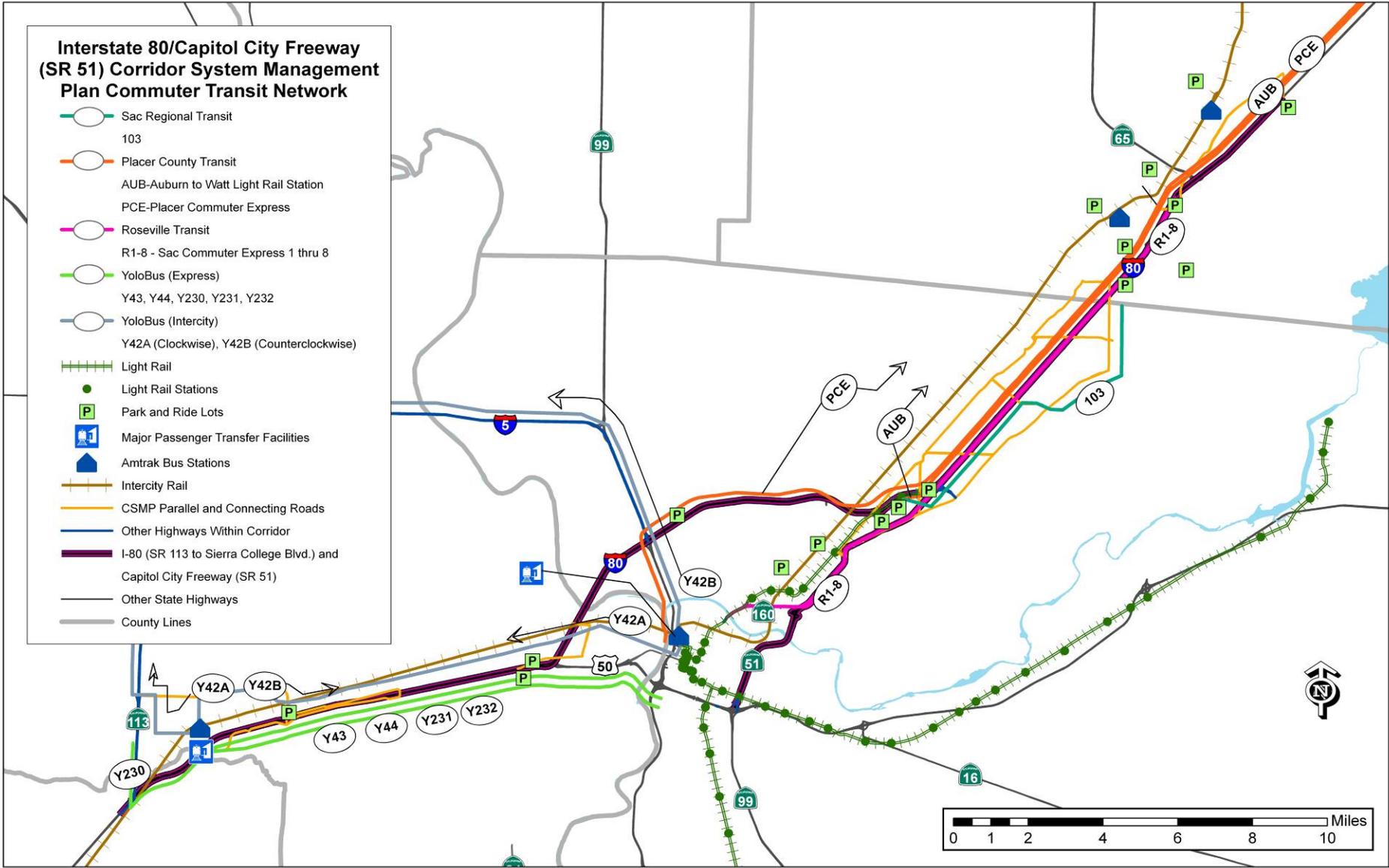


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# Interstate 80/Capitol City Freeway (SR 51) Corridor System Management Plan Commuter Transit Network

-  Sac Regional Transit 103
-  Placer County Transit
  - AUB-Auburn to Watt Light Rail Station
  - PCE-Placer Commuter Express
-  Roseville Transit
  - R1-8 - Sac Commuter Express 1 thru 8
-  YoloBus (Express)
  - Y43, Y44, Y230, Y231, Y232
-  YoloBus (Intercity)
  - Y42A (Clockwise), Y42B (Counterclockwise)
-  Light Rail
-  Light Rail Stations
-  Park and Ride Lots
-  Major Passenger Transfer Facilities
-  Amtrak Bus Stations
-  Intercity Rail
-  CSMP Parallel and Connecting Roads
-  Other Highways Within Corridor
-  I-80 (SR 113 to Sierra College Blvd.) and Capitol City Freeway (SR 51)
-  Other State Highways
-  County Lines



# I-80 CSMP Performance Measures

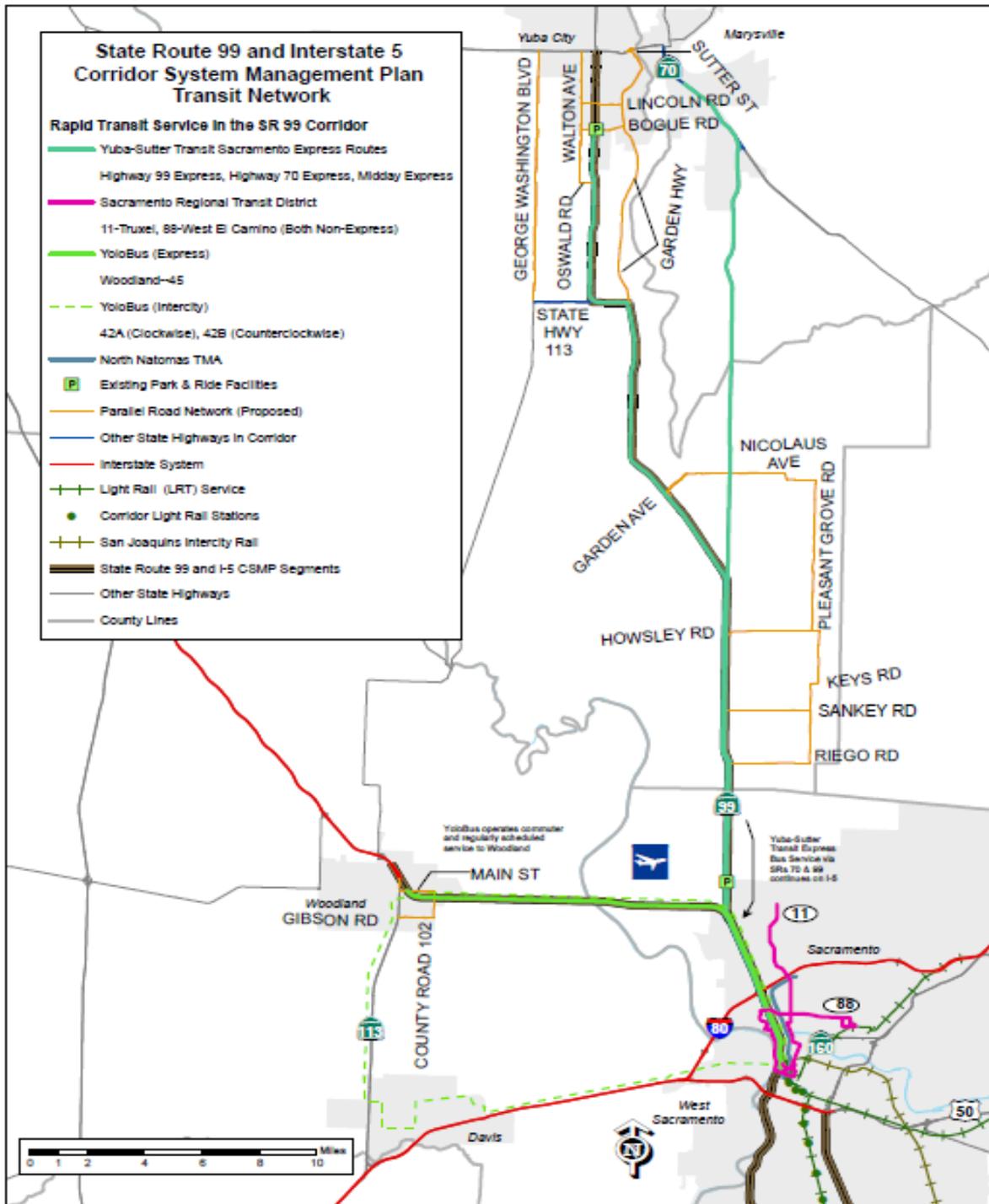


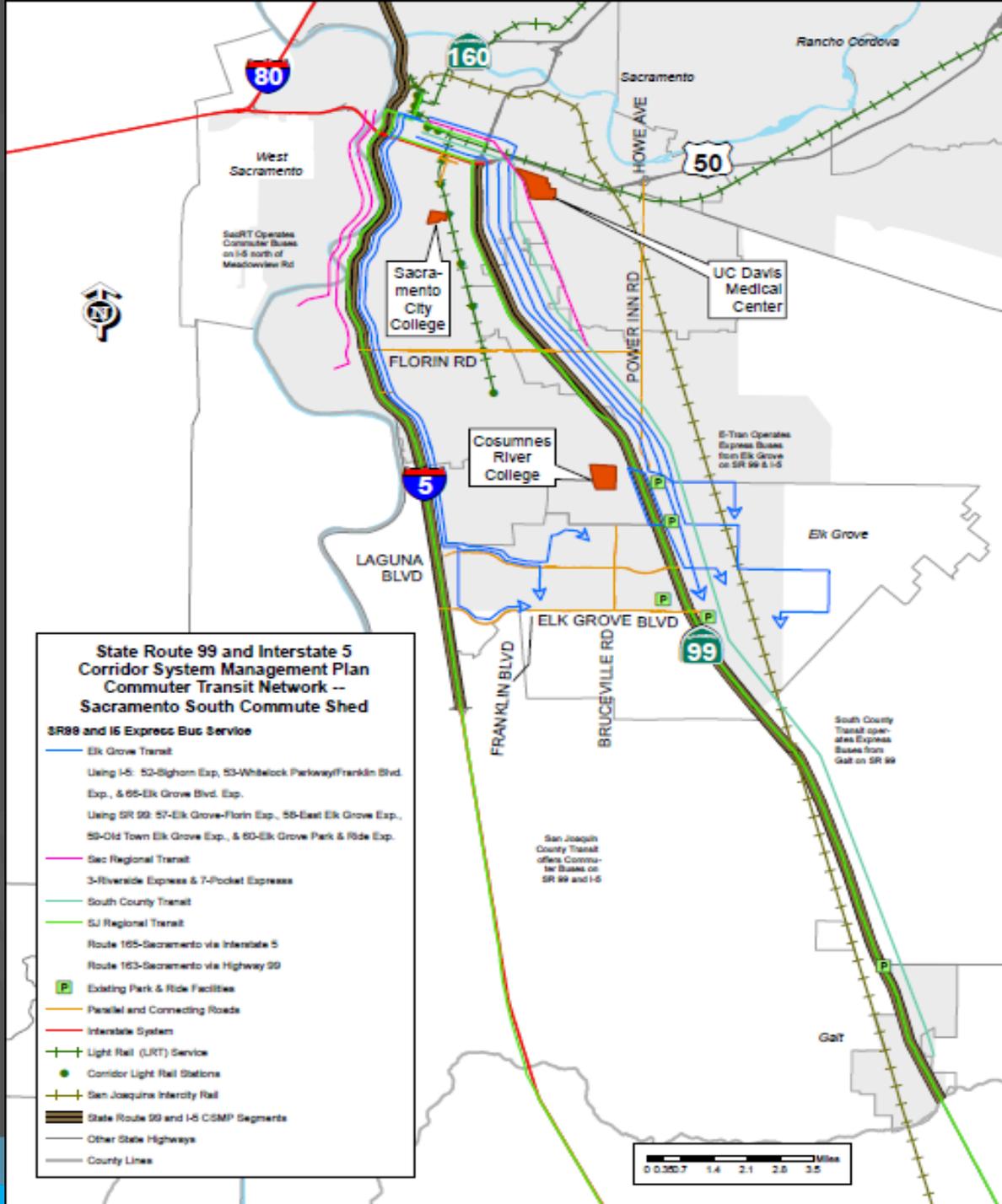
- LOS
- Total Vehicle Hours of Delay
- Total Person Minutes of Delay
- Minutes of Delay per Vehicle
- Minutes of Delay per Person
- Vehicle Travel Time (Minutes)
- Distressed Pavement
- Reported Collision Rate
- Reliability
- Productivity
- Available Capacity

## State Route 99 and Interstate 5 Corridor System Management Plan Transit Network

### Rapid Transit Service in the SR 99 Corridor

- Yuba-Sutter Transit Sacramento Express Routes  
Highway 99 Express, Highway 70 Express, Midday Express
- Sacramento Regional Transit District  
11-Truxel, 88-West El Camino (Both Non-Express)
- YoloBus (Express)  
Woodland-45
- - - YoloBus (Intercity)  
42A (Clockwise), 42B (Counterclockwise)
- North Natomas TMA
- P Existing Park & Ride Facilities
- Parallel Road Network (Proposed)
- Other State Highways In Corridor
- Interstate System
- + + + Light Rail (LRT) Service
- Corridor Light Rail Stations
- + + + San Joaquin Intercity Rail
- State Route 99 and I-5 CSMP Segments
- Other State Highways
- County Lines





**State Route 99 and Interstate 5 Corridor System Management Plan Commuter Transit Network -- Sacramento South Commute Shed**

**SR99 and I5 Express Bus Service**

- Elk Grove Transit
  - Using I-5: 52-Sighorn Exp., 53-Whitlock Parkway/Franklin Blvd. Exp., & 66-Elk Grove Blvd. Exp.
  - Using SR 99: 57-Elk Grove-Florin Exp., 58-East Elk Grove Exp., 59-Old Town Elk Grove Exp., & 60-Elk Grove Park & Ride Exp.
- Sec Regional Transit
  - 3-Riverside Express & 7-Pocket Expresses
- South County Transit
- SJ Regional Transit
  - Route 105-Sacramento via Interstate 5
  - Route 163-Sacramento via Highway 99
- Existing Park & Ride Facilities (P)
- Parallel and Connecting Roads
- Interstate System
- Light Rail (LRT) Service
- Corridor Light Rail Stations
- San Joaquin Intercity Rail
- State Route 99 and I-5 CSMP Segments
- Other State Highways
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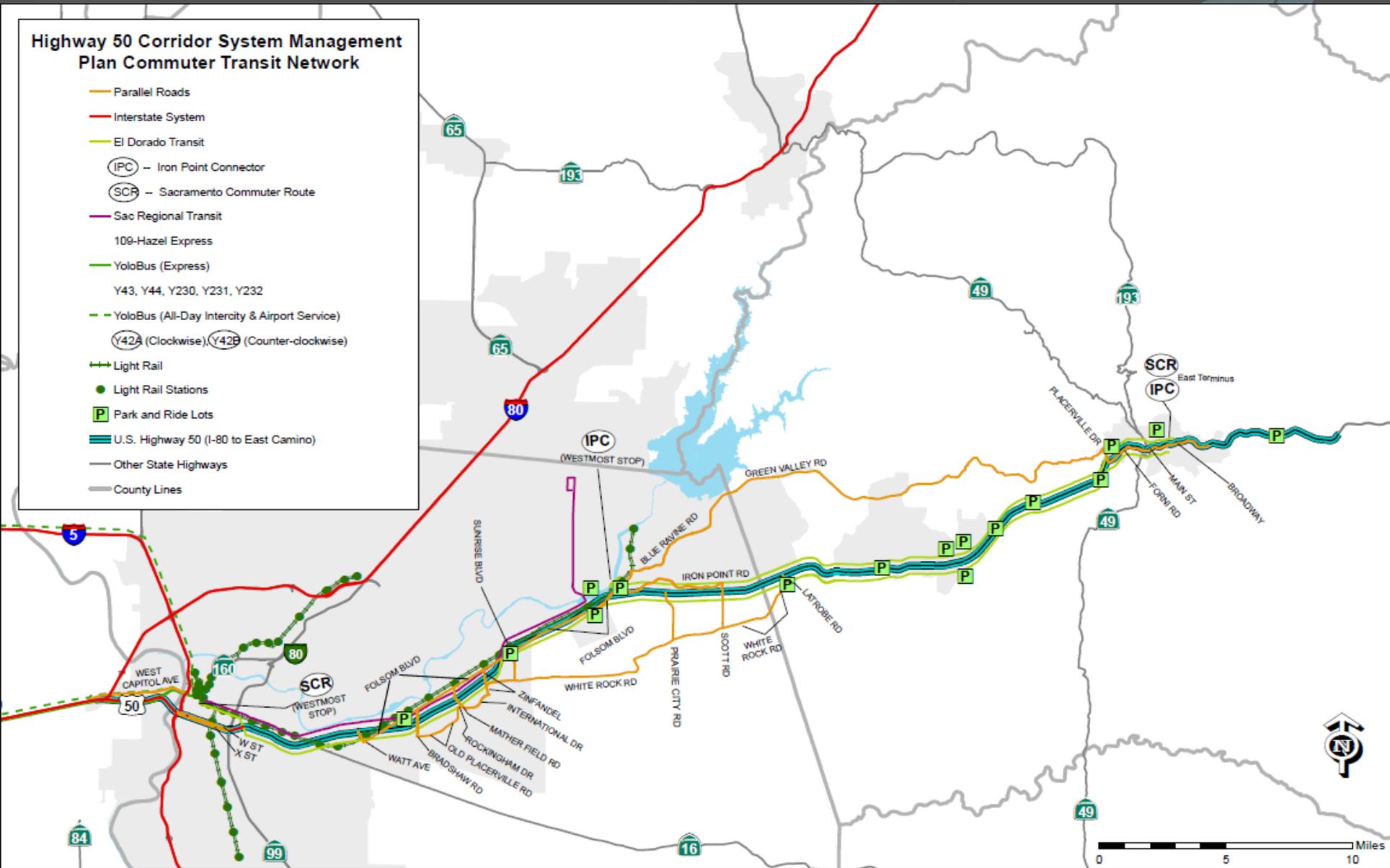
# SR-99 & I-5 CSMP Performance Measures



- LOS
- Total Vehicle Hours of Delay
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- Minutes of Delay per Person
- Vehicle Travel Time (Minutes)
- Distressed Pavement
- Reported Collision Rate
- Reliability
- Lost Productivity
- Available Capacity

# Highway 50 Corridor System Management Plan Commuter Transit Network

- Parallel Roads
- Interstate System
- El Dorado Transit
- IPC – Iron Point Connector
- SCR – Sacramento Commuter Route
- Sac Regional Transit
- 109-Hazel Express
- YoloBus (Express)
- Y43, Y44, Y230, Y231, Y232
- - - YoloBus (All-Day Intercity & Airport Service)
- Y42A (Clockwise), Y42B (Counter-clockwise)
- +—+—+— Light Rail
- Light Rail Stations
- P Park and Ride Lots
- U.S. Highway 50 (I-80 to East Camino)
- Other State Highways
- County Lines



# US 50 CSMP Performance Measures



- LOS
- Total Vehicle Hours of Delay
- Total Person Minutes of Delay
- Minutes of Delay per Vehicle
- Minutes of Delay per Person
- Vehicle Travel Time (Minutes)
- Distressed Pavement
- Reported Collision Rate
- Reliability
- Lost Productivity
- Available Capacity