



# FINE TUNING THE 91 CORRIDOR

Commission Meeting  
February 14, 2018

*Michael Blomquist, Toll Program Director*

*David Thomas, Toll Project Manager*

*Sheldon Mar, Consultant Project Manager*



# Today's Presentation

- Brief review of Commission activity on the 91 Corridor
- Results of recently completed traffic analysis on 91 Corridor
- Examination of options to address congestion “hot spots”
- Discussion of policy considerations as we move forward



# Fine Tuning the Corridor

- 91 Project has provided added capacity and improvements to the overall corridor
- In spite of added capacity, key congestion areas exist during certain times/locations along corridor
- Congestion “Hot Spots” include:
  - Express Lanes entrance @ Westbound 91 at McKinley
  - Express Lanes entrance @ I-15 North
  - Overall 91 corridor in AM hours at Orange County Line
  - Eastbound Express Lanes exit on Friday afternoon



# IMPROVEMENTS COMPLETED

## EASTBOUND

	Improvement	Completion Date
1	Added a new overhead sign– 2 miles in advance of 15/91 split	August 2017
2	Added new pavement markings– freeway route shields in advance of 15/91 split	August 2017
3	Added new channelizers - past 15/91 split between express and general purpose lanes	August 2017
4	Changed an overhead sign– at 15/91 split	October 2017



# IMPROVEMENTS COMPLETED

## WESTBOUND

	Improvement	Completion Date
5	Changed striping transition of the 15/91 lane merge area	August 2017
6	Added channelizers - better separate 15/91 merge area	August 2017
7	Changed striping - extended the express lane auxiliary lane entrance to ease the transition	August 2017
8	Changed striping- extended the express lane entrance to the east to ease the transition	October 2017
9	Increased enforcement- CHP added presence at entrance area to discourage traffic violations	November 2017



# IMPROVEMENTS COMPLETED

## COUNTY LINE

	Improvement	Completion Date
10	Refreshed striping - made all temporary striping and pavement markings permanent	September 2017
11	Added new channelizers	September 2017
12	Modified signs	September 2017



# RCTC's Toll Rate Policy

## Corridor Efficiency

Customer commute

Optimize vehicle throughput

Future corridor improvements

## Financial Commitments

Meet debt obligations

Sustain financial viability

Meet bond covenants

## Lane Access

Vehicle occupancy

Balance payers and carpoolers



# ACTIVE MANAGEMENT

## MANAGING DEMAND FOR EXPRESS LANES

Monitoring express lane traffic and toll rates: March 20, 2017 – Feb. 5, 2018

- Installed additional traffic counters
- 672 toll rates monitored – 7 days/week, 24 hours/day, all movements
  - 599 rates reviewed quarterly per permanent toll policy
  - 73 rates reviewed weekly to more readily manage demand

Period	Toll Rates Monitored	
	Weekly	Quarterly
3/17 to 7/17	672	0
7/17 to 12/17	124	548
12/17 to present	73	599

**Demand for the lanes is stabilizing and getting more predictable!**





# ACTIVE MANAGEMENT

## MANAGING DEMAND FOR EXPRESS LANES

### Toll rate changes

- 23 rate schedule adjustments have been made since opening lanes in March
- The 23 adjustments resulted in:
  - 479 toll rate increases due to traffic volume
  - 44 toll rate decreases due to traffic volume



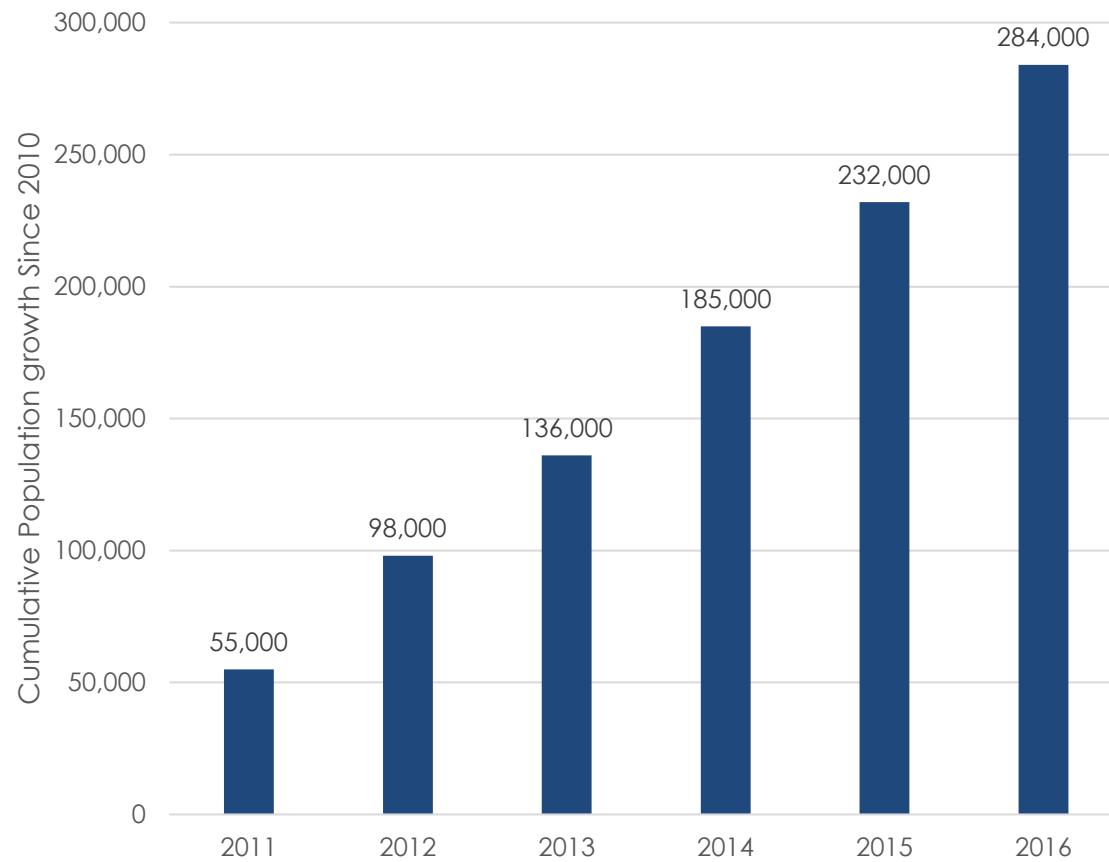
# TRAFFIC DEMAND DATA





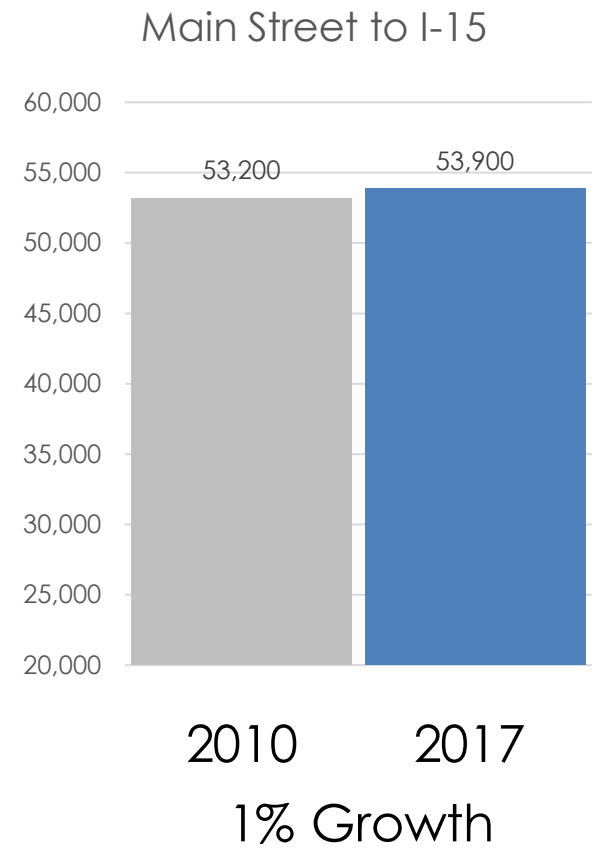
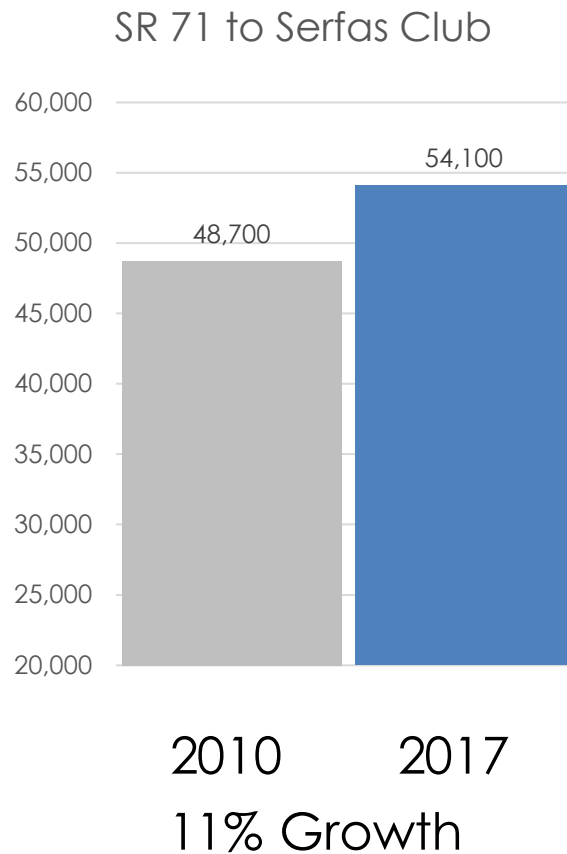
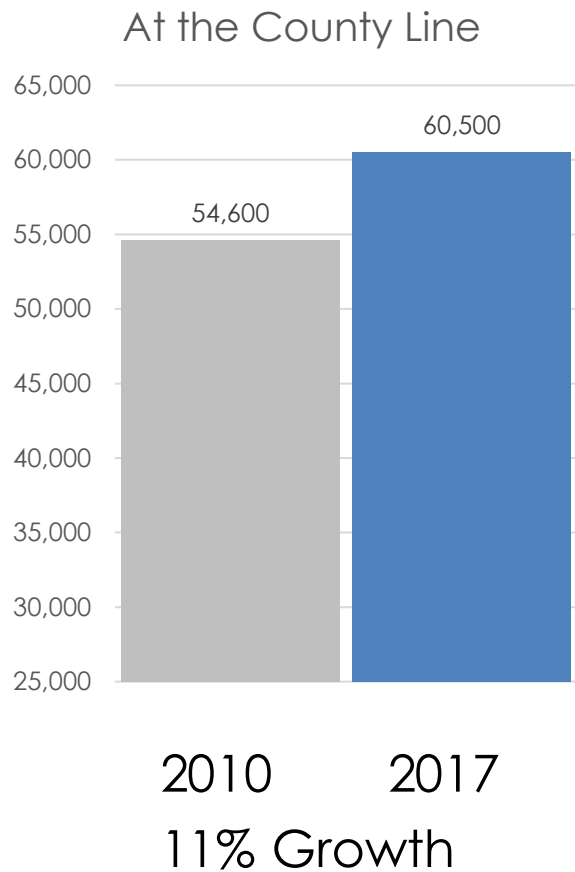
# POPULATION GROWTH

Population Growth since 2010: Riverside-San Bernardino-Ontario, CA Metro Area



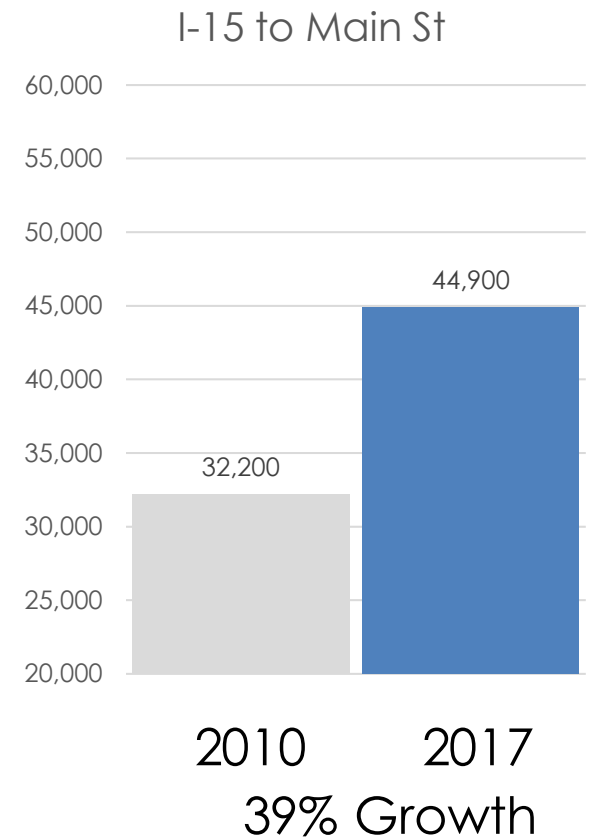
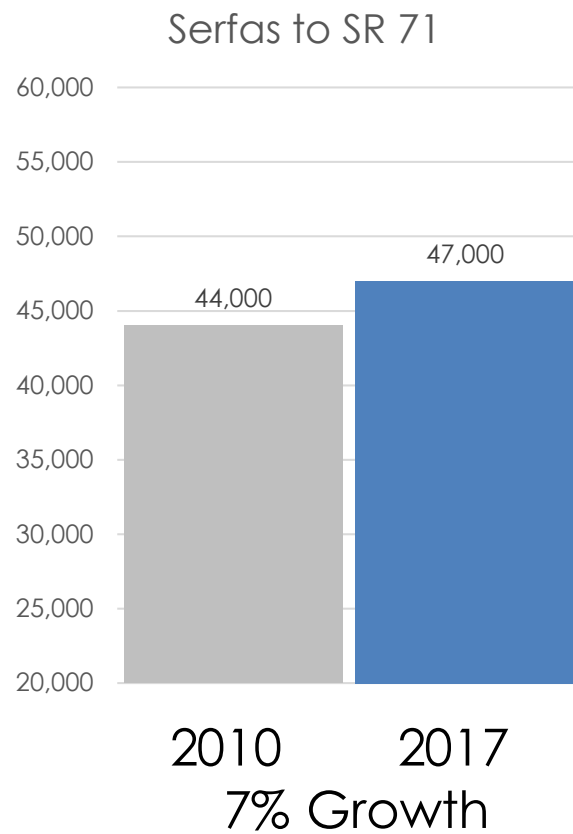
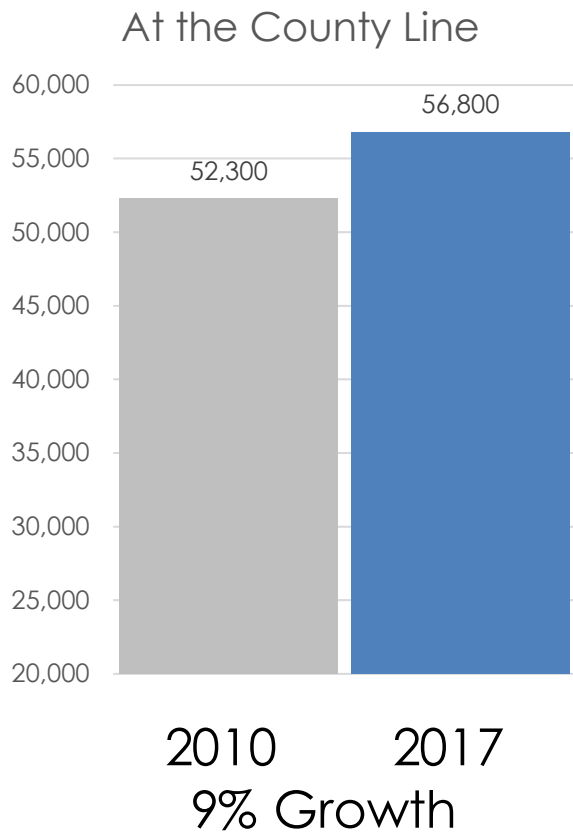


# EASTBOUND TRAFFIC GROWTH





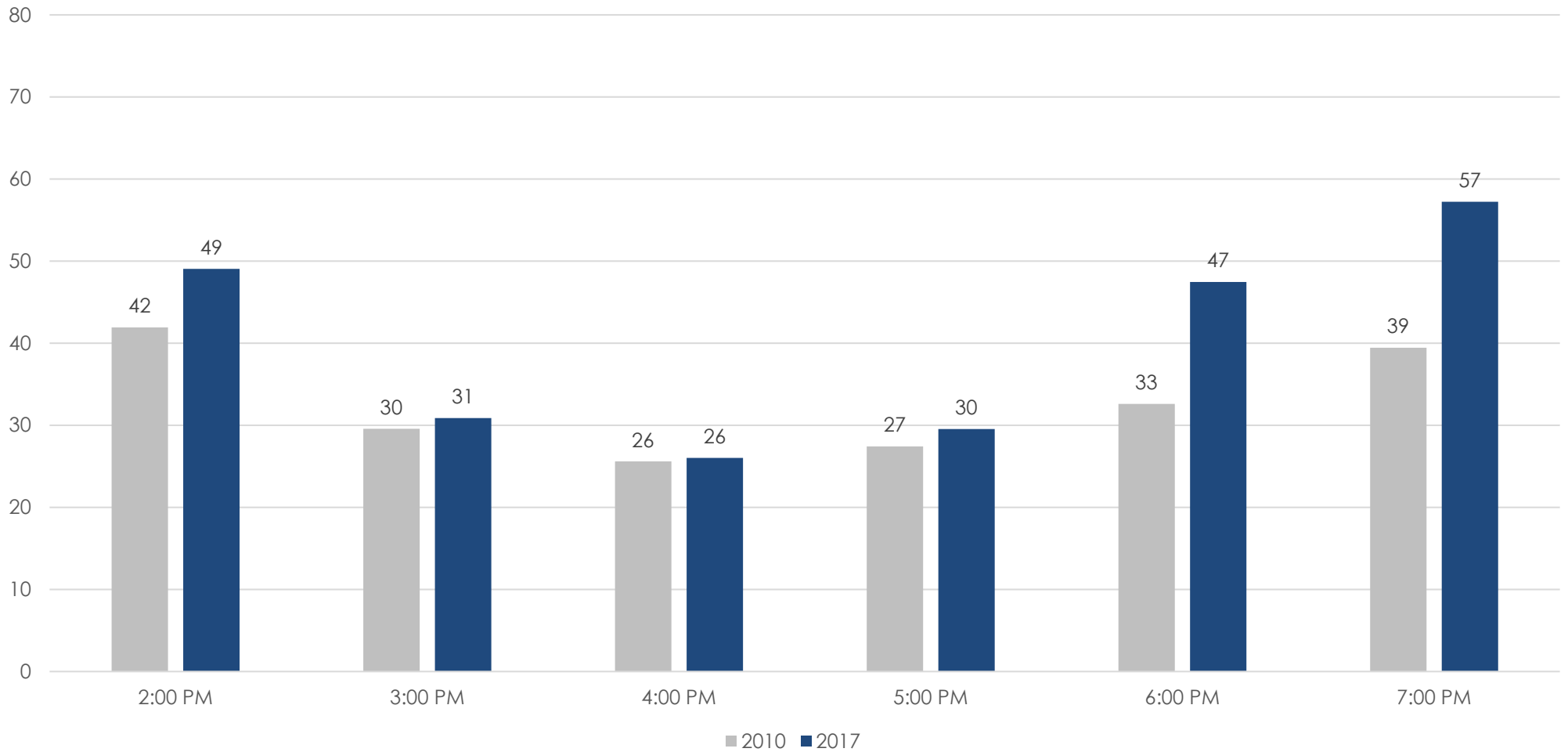
# WESTBOUND TRAFFIC GROWTH





# EASTBOUND TRAVEL SPEEDS

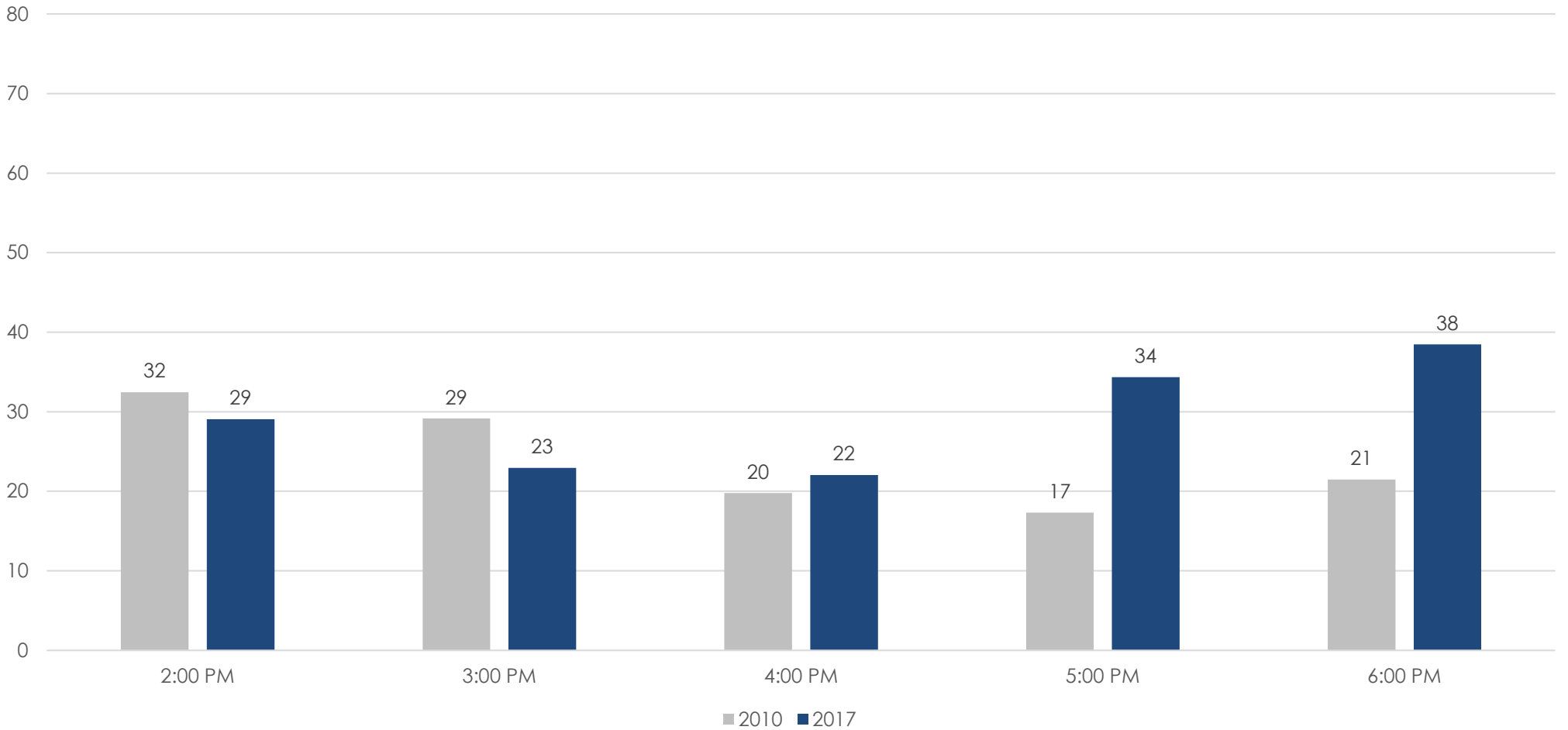
Eastbound 91 GP - Monday to Thursday





# GETTING OUT OF TOWN ON FRIDAY

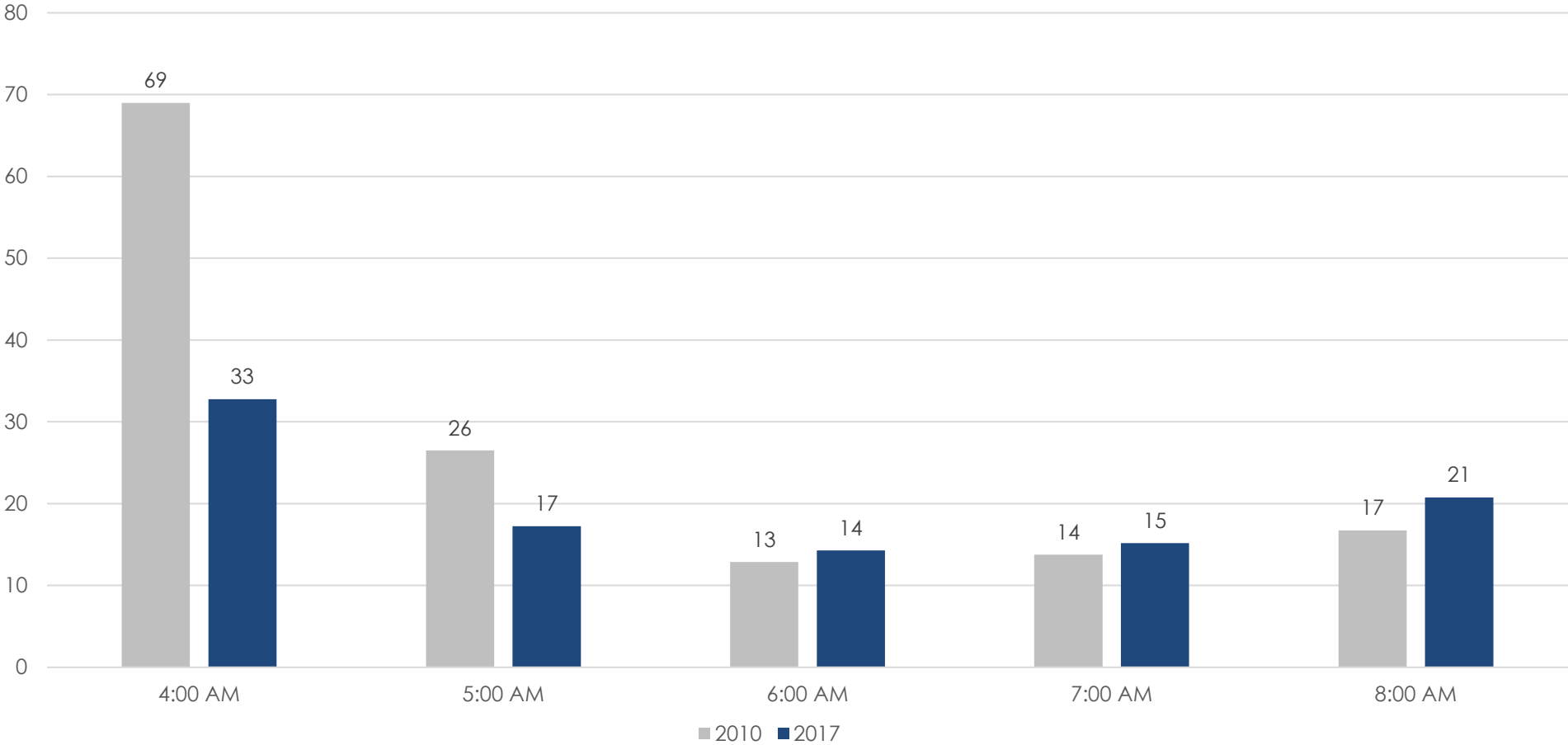
Eastbound 91 GP - Friday





# DRILLING DOWN ON THE DETAILS

Westbound 91 GP - Typical Weekdays (excluding Friday)

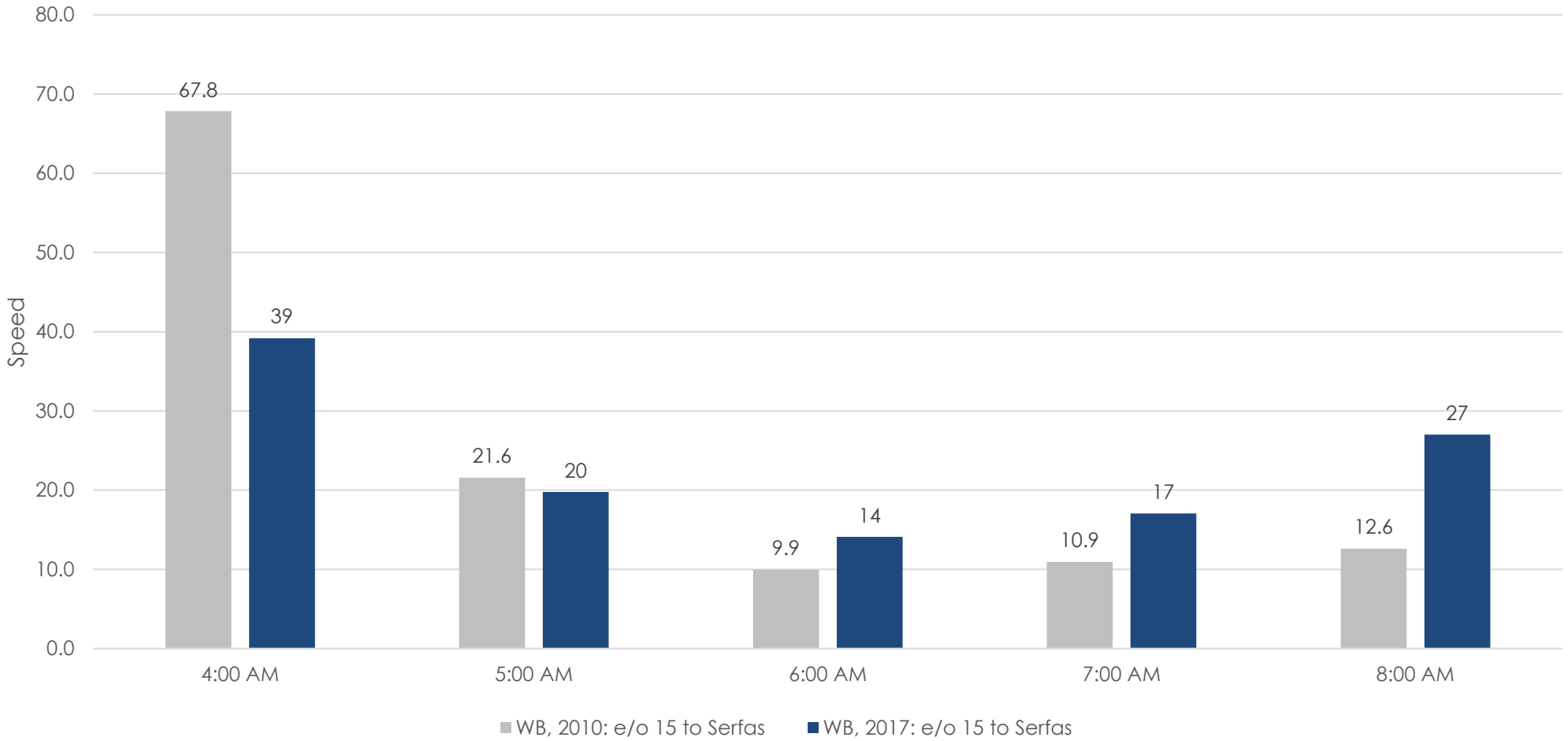






# WESTBOUND TRAVEL SPEEDS

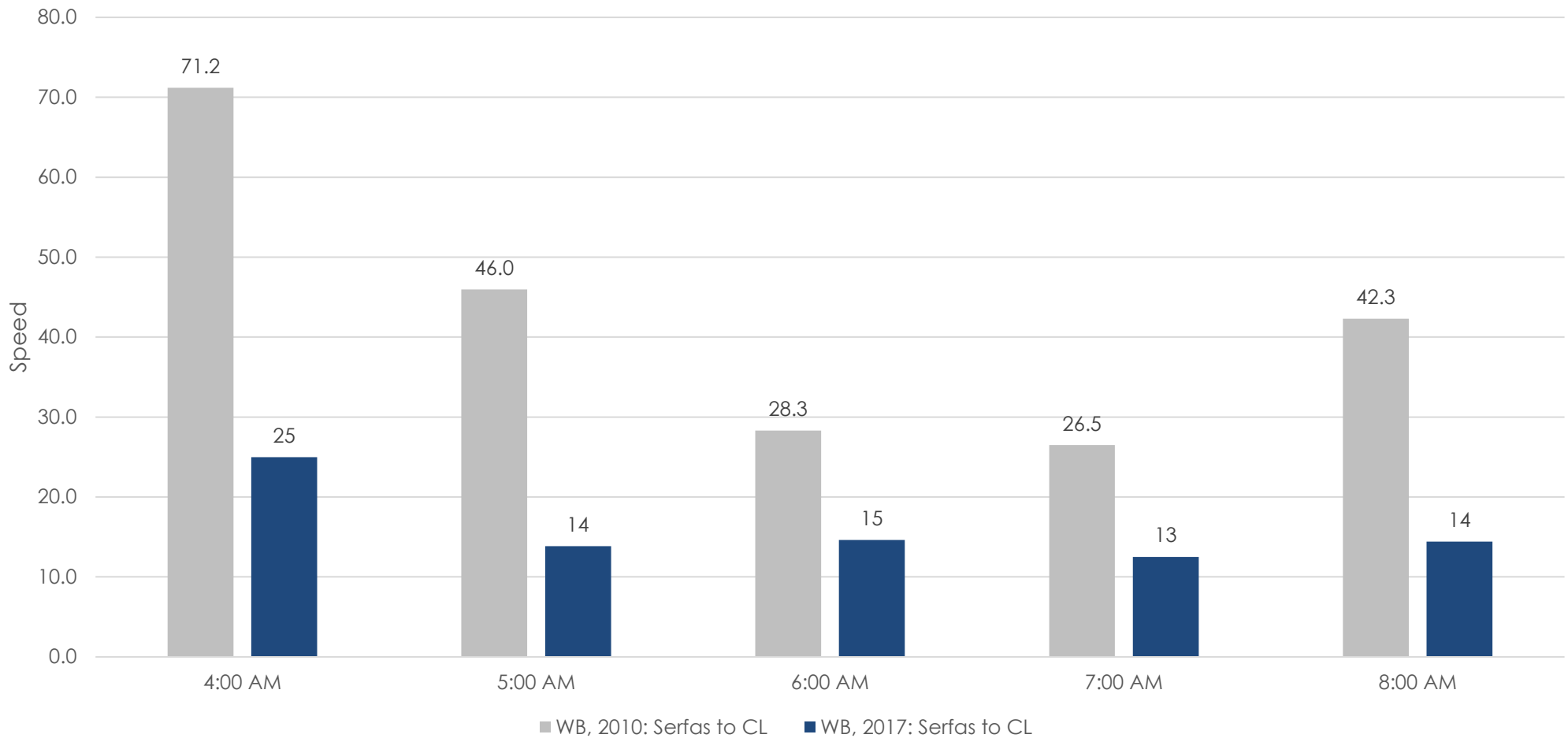
Westbound 91 GP Speed: e/o I-15 to Serfas Club Drive





# WESTBOUND TRAVEL SPEEDS

Westbound 91 GP Speed: Serfas Club to County Line

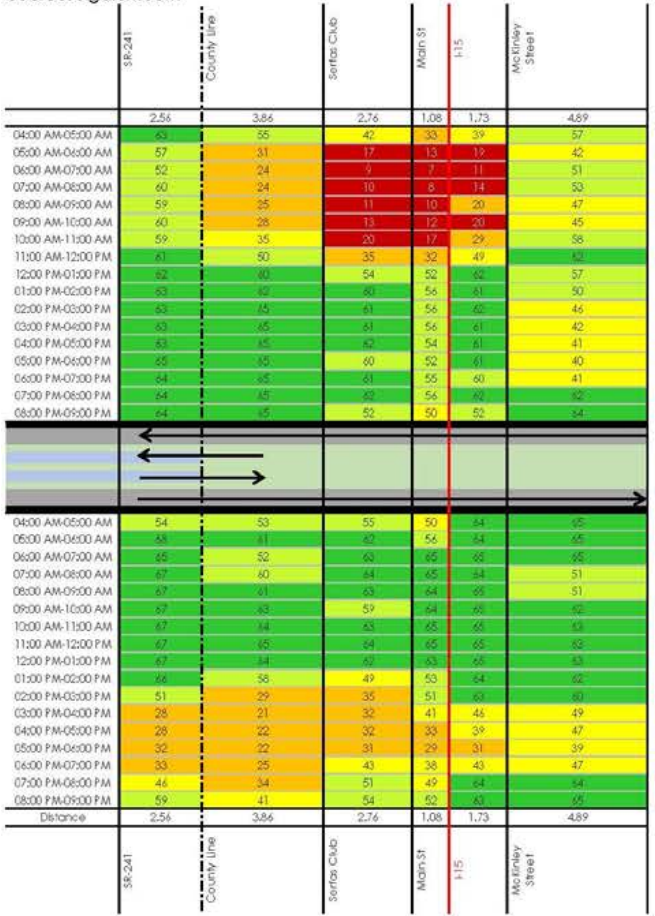




# WHEN & WHERE ARE THE HOT SPOTS?

SR 91 GP Lanes, Average Speeds - Pre-EL  
2/1/17 to 3/16/17

Source: Sigalert.com



SR 91 GP Lanes, Average Speeds - Post-EL  
3/21/17 to 5/14/17

Source: Sigalert.com



SR 91 GP Lanes, Average Speeds - Post EL  
8/25/17 to 10/15/17

Source: Sigalert.com





# CONSIDERATION OF OPTIONS





# 91 Westbound Traffic Flow Options

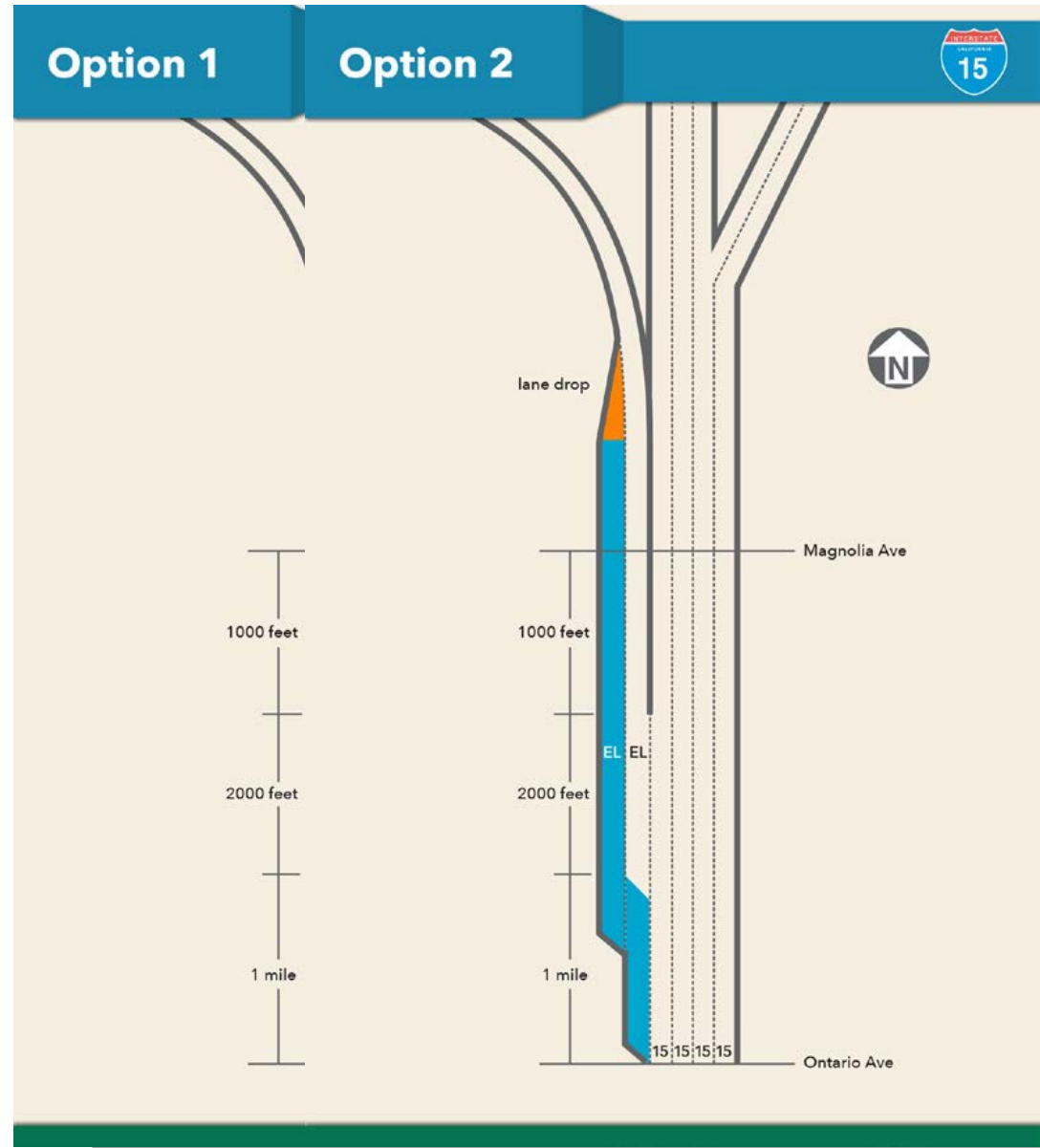
## Option 6: 5+1 General Purpose Express Lanes to Green River On Ramp Combined with Continuous Weave Lane



	Green River Rd On Ramp			Off Ramp			71 On
241	6	6	6	6		6	
241	5	5	5	5	5	5	5
91	4	4	4	4	4	4	4
91	3	3	3	3	3	3	3
91	2	2	2	2	2	2	2
91	1	1	1	1	1	1	1
	EL Ingress		Weave Lane		EL Egress		
	EL 2		EL 2			EL 2	EL 2
	EL 1		EL 1			EL 1	EL 1



# 15 Northbound Traffic Flow Options





**WHERE DO WE GO FROM HERE?**





# Decision Criteria

- Do No Harm
- Coordination required with Caltrans, OCTA, and CHP
- Budget and speed of implementation
- Vehicle and person throughput remain priorities
- Need for Consistency with RCTC's Toll Policy





# Next Steps in Evaluating Options

## Examine & Analyze

- Operational Impact to Corridors
  - General Purpose Lanes
  - Express Lanes
  - Overall Corridor
- Revenue Impacts
- Other Considerations
  - Environmental Clearance
  - Cost
  - How quickly can it be delivered?
- Return to Western Programs and Projects Committee