



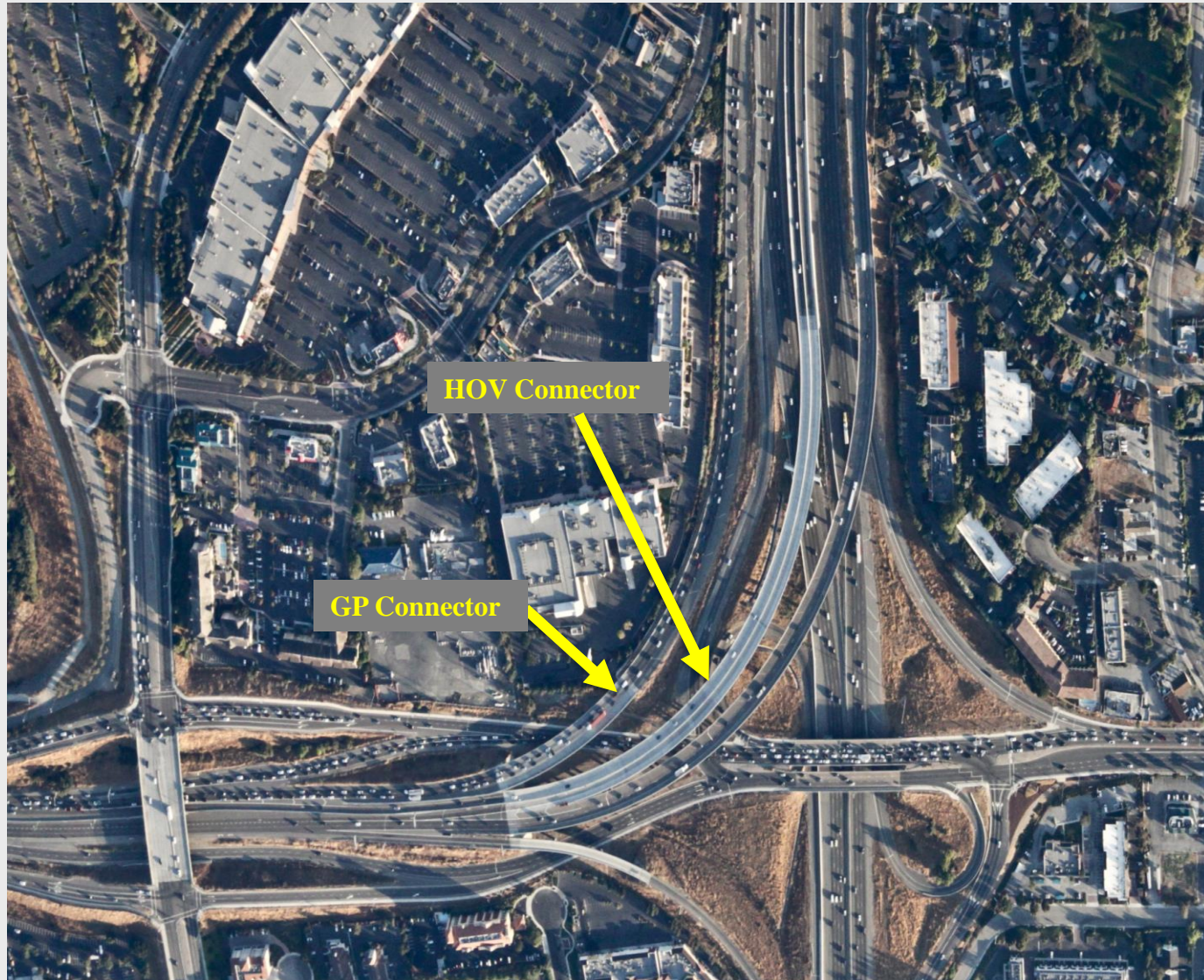
SR 237 Express Lanes

Policy Implications and Lessons Learned

Murali Ramanujam, Casey Emoto & Gene Gonzalo
Santa Clara Valley Transportation Authority (VTA)



Conversion of HOV to HOV Connector



SILICON VALLEY EXPRESS LANES



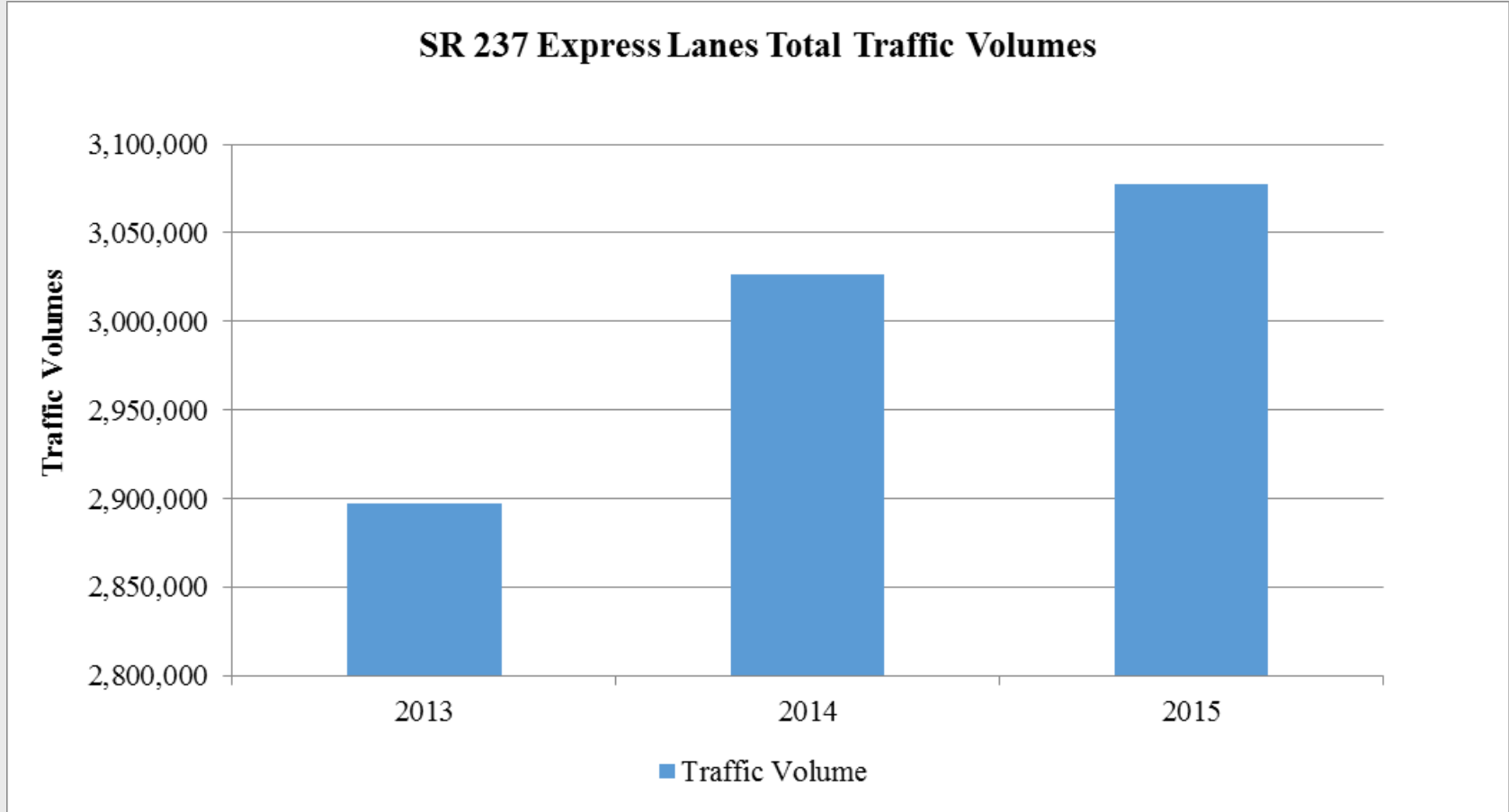
Freeways and Express Lanes

Phase 1 (In Operation)	Future Phases - TBD
Phase 2	Freeways
Phase 3	HOV Lane to HOV Lane Connector
Phase 4	

0 1.25 2.5 5 Miles

MORGAN HILL
GILROY
Dunne Avenue

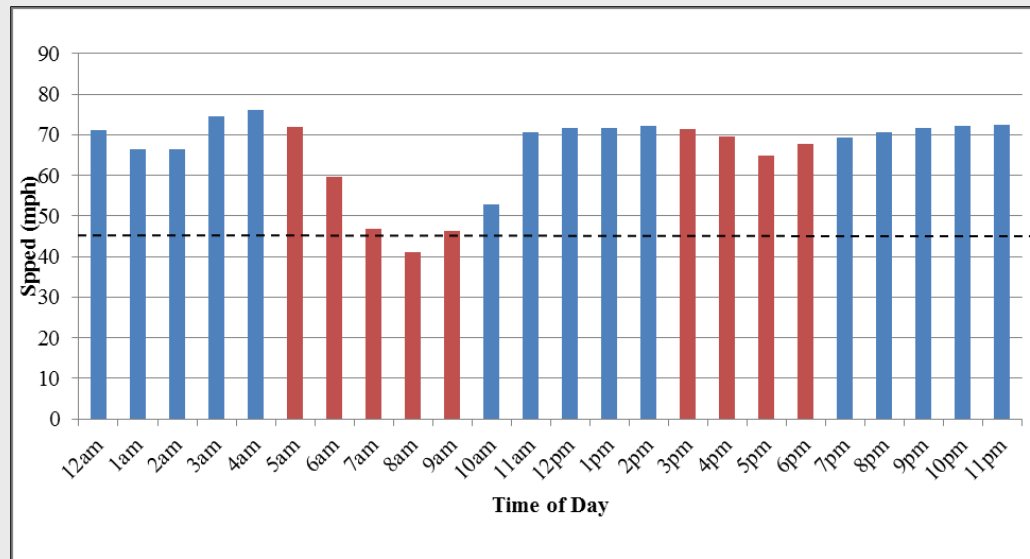
Increased Express Lanes Usage



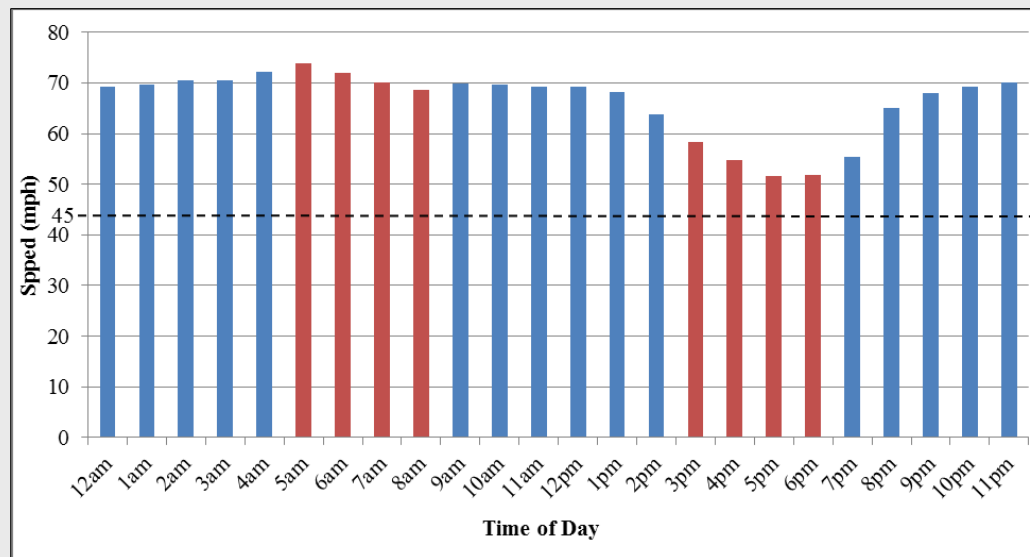
Average Corridor Speeds (FY 2016 Quarter 3)



Westbound



Eastbound



Downstream congestion (HOV Only)



Occupancy Requirement



Clean Air Vehicle Count



Morning Peak Hour

Date	1/14/2016	2/4/2016	3/16/2016	Average	Percent
Time	8:00-9:00 AM	8:00-9:00 AM	8:00-9:00 AM		
Tolled Vehicles	167	162	236	188	13%
Clean Air Vehicles	573	507	605	562	38%
Carpool	787	641	728	719	49%
Total	1527	1310	1569	1,469	100%

Afternoon Peak Hour

Date	1/13/2016	2/22/2016	3/16/2016	Average	Percent
Time	4:30-5:30 PM	4:30-5:30 PM	4:30-5:30 PM		
Tolled Vehicles	186	195	155	179	14%
Clean Air Vehicles	334	385	481	400	31%
Carpool	768	761	580	703	55%
Total	1,288	1,341	1,216	1,282	100%

Green Car for The Masses



Money

U.S. +

Business

Markets

Tech

Media

Personal Finance

Small Biz

Luxury

stock tickers

Log In



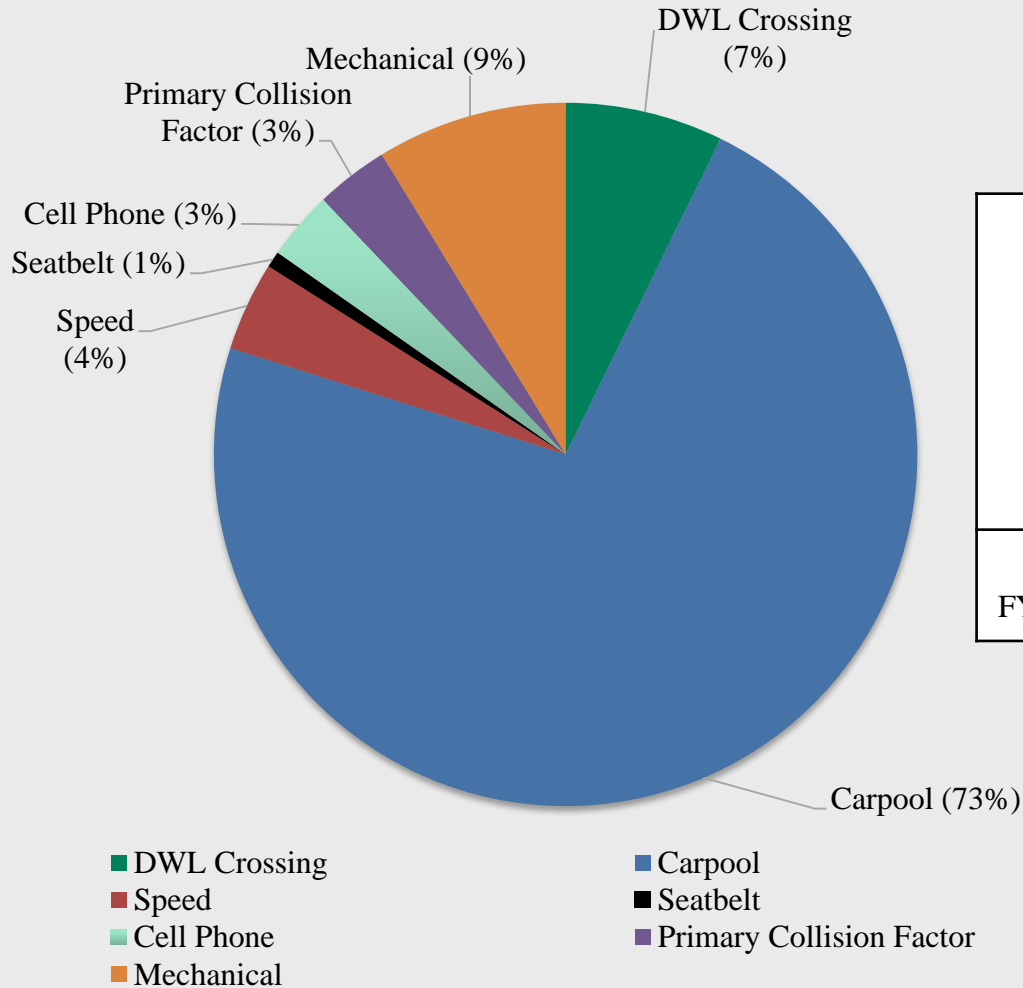
Tesla Model 3's first week: 325,000 orders

by Chris Isidore @CNMONEY

April 7, 2016: 12:50 PM ET



FY 2015 CHP Citations Summary

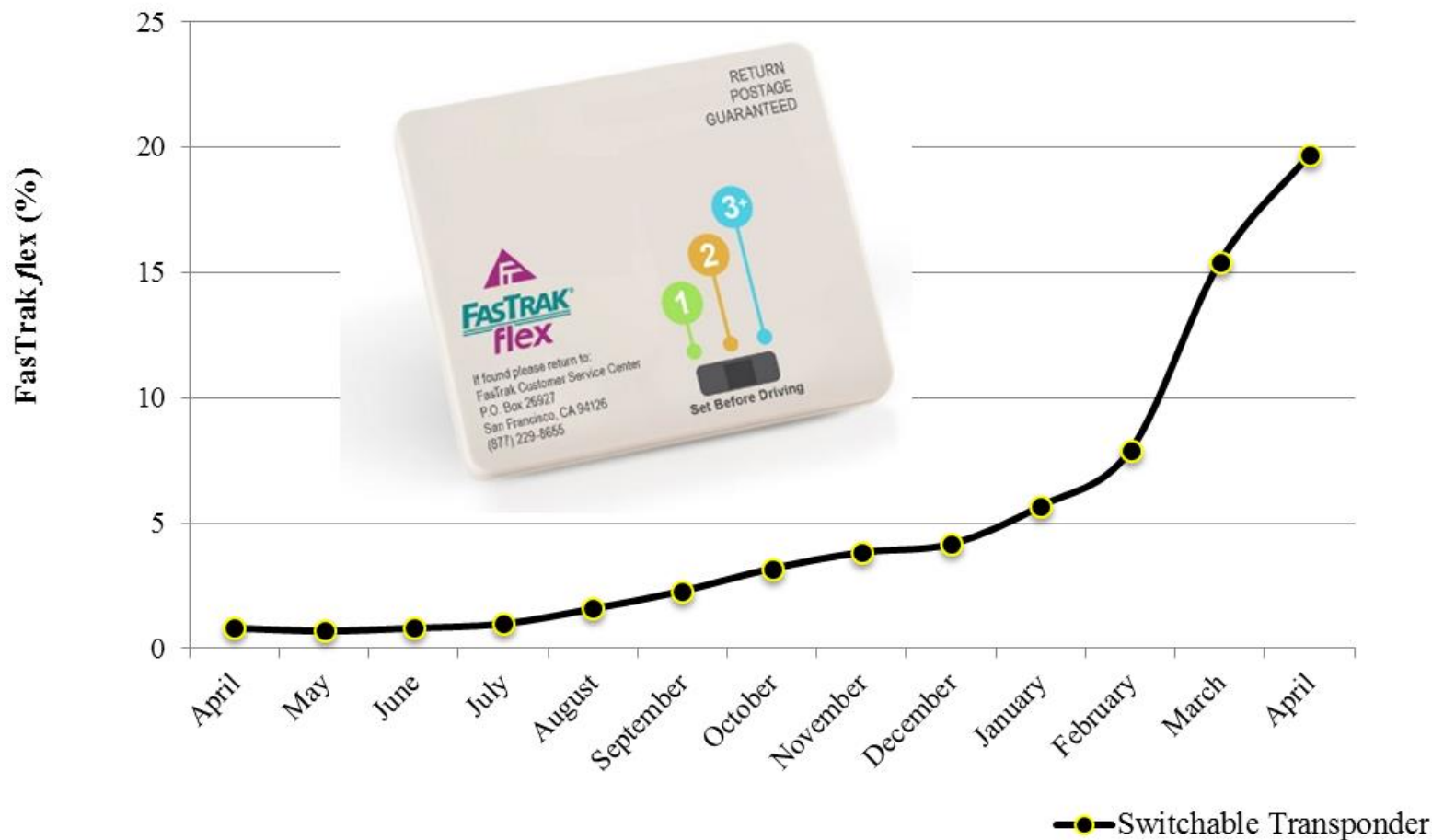


	Total Citations	Verbal Warnings	DWL Crossing	Carpool	Speed	Seatbelt	Cell Phone	Primary Collision Factor	Mechanical
Total FY (2015)	537	110	39	390	22	4	17	18	47

FasTrak Flex Switchable Transponders



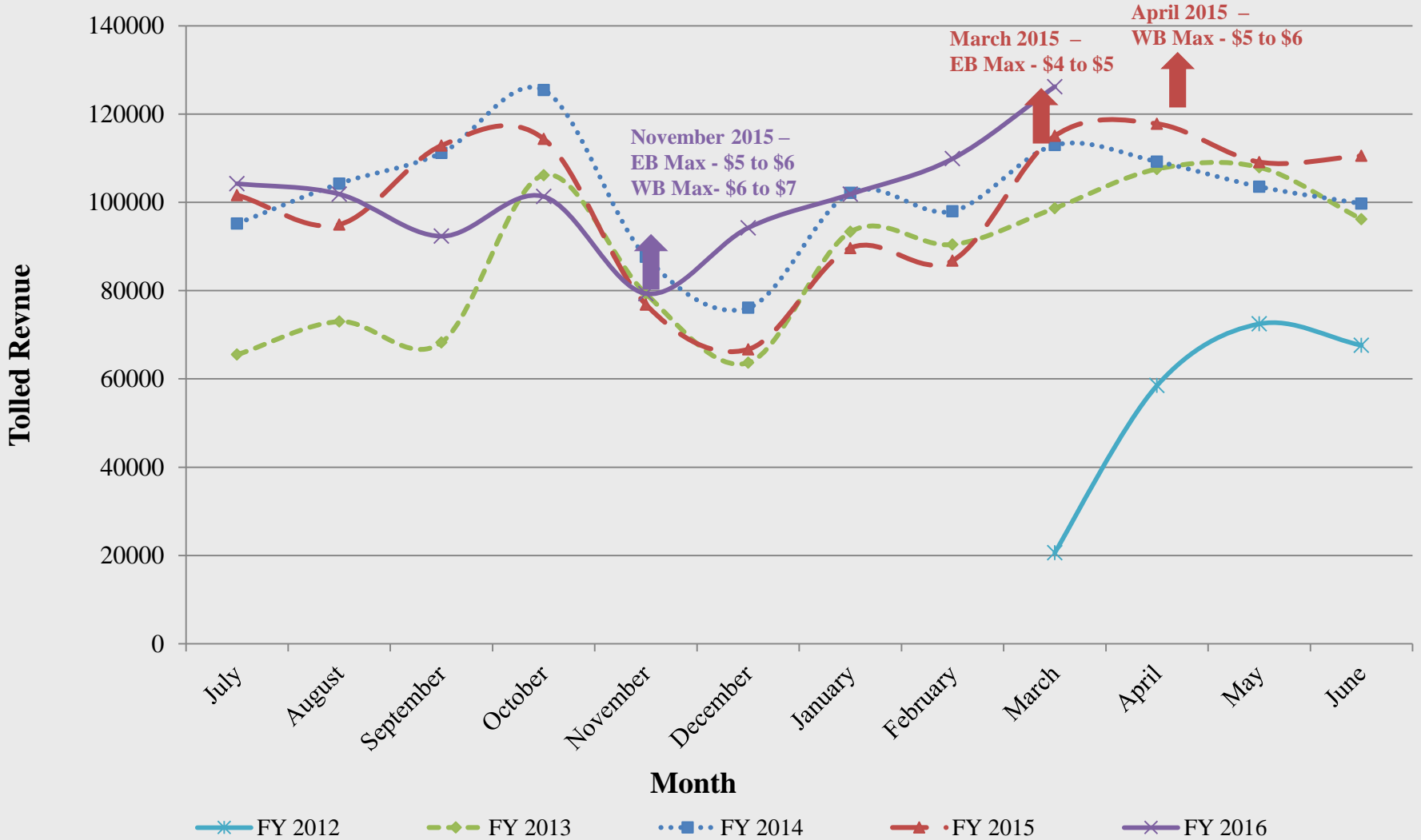
SR 237 Express Lanes usage of FasTrak flex



Access arrangement



Tolled Revenue by Month



Policy Implications on Operations

- Performance metric – minimum speed
- HOV requirement and exemptions
- Enforcement – toll violation or occupancy violation
- Business rules – tag requirement
- Toll rate – cap or no cap
- Goal – maximize revenue or throughput
- Hours of operations – peak period or 24/7

What Are The Lessons Learned?

- Focus on providing “Express” or reliable trip
- Expand hours of operations beyond peak period
- Use automation techniques to capture toll violation enforcement
- Implement dual lane Express Lanes where possible
- Engage users to get input through user group and provide real-time information



Murali Ramanujam

Santa Clara Valley Transportation Authority (VTA)

Murali.Ramanujam@vta.org

(408) 952-8905