

# **Santa Clara County Expressways**

## **Complete Streets & Design Challenges**

Presented as part of County Partnerships to Improve  
Community Health Project

Panel Discussion

September 24, 2015

By

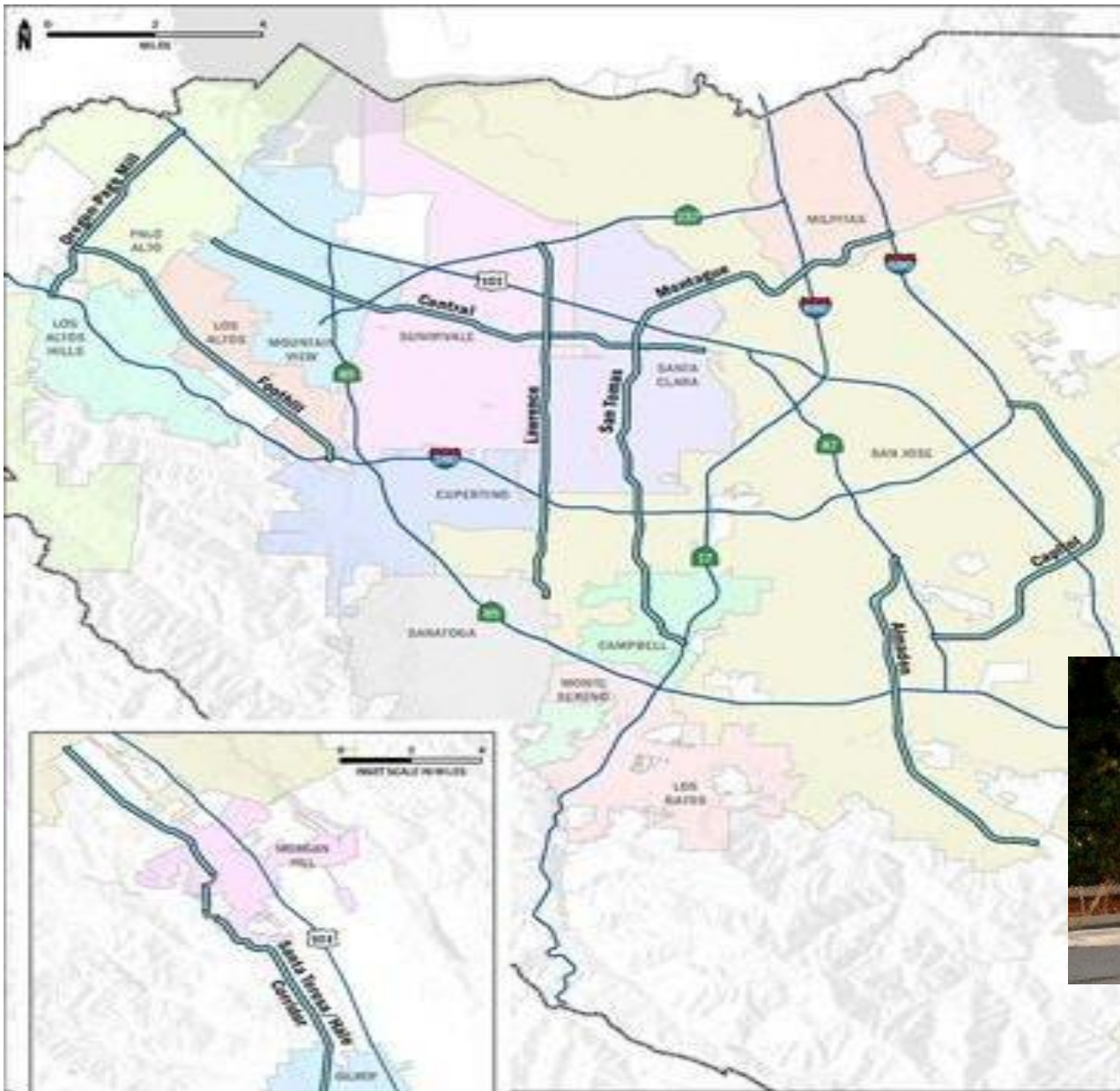
Dan Collen, Deputy Director, Infrastructure Development  
Roads & Airports Department



# Santa Clara County Expressways

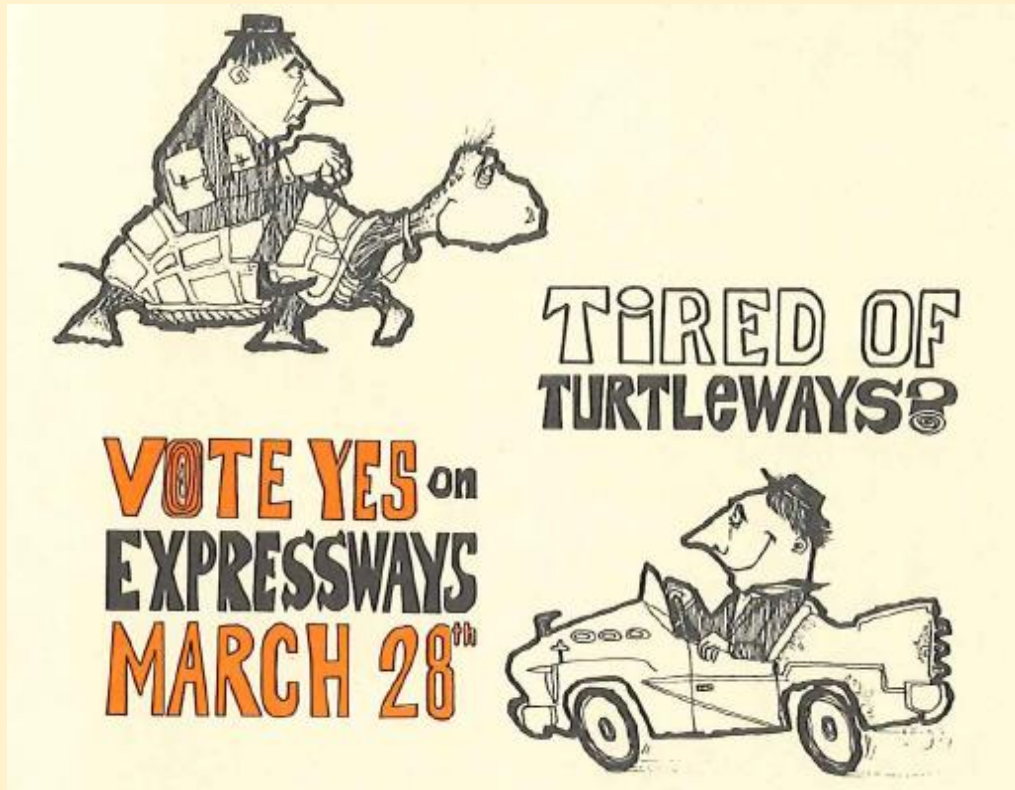
**Eight Expressways:  
62 CL miles**

**1.5 Million  
Vehicle Trips Daily**



**South County Legacy Route**

# In the Beginning...



## MEASURE (A) Ballot text:

“Shall the County... [sell bonds to construct]... County highways and expressways, including...interchanges, grade separations and highway bridges...”

...the vision was a system of local freeway-like roadways that would “end traffic jams!!!”

# **Expressway Characteristics Vary**

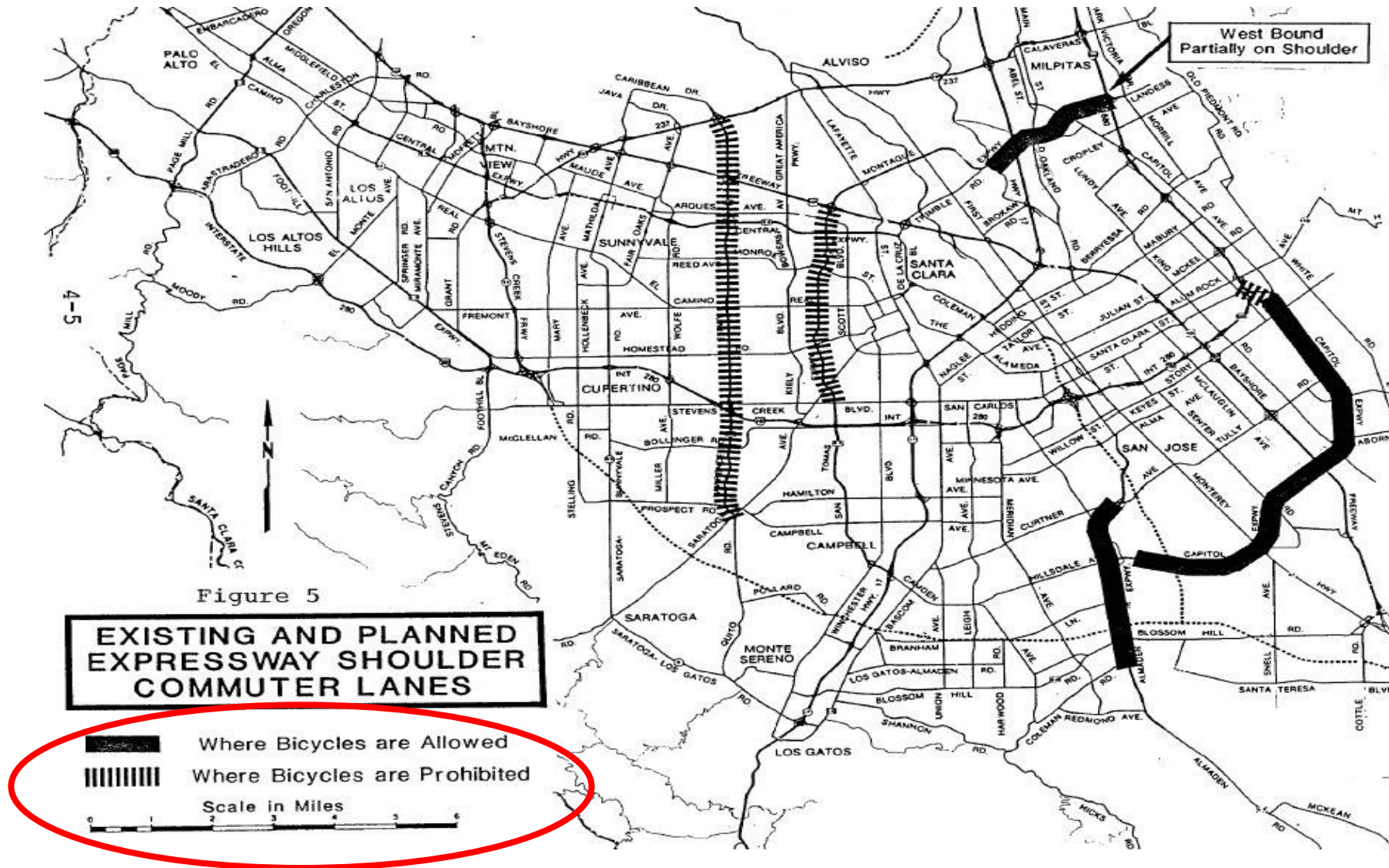
- **Speed limit: 35 to 50 mph**
- **Adjacent land uses: residential, commercial, industrial**
- **Lanes: 4 to 8**
- **Traffic volume: 30,000 to over 80,000 ADT**
- **Shoulder width: 4-6 ft. to 10 ft. exclusive/shared**
- **City has “police powers” – in addition to patrolling, enforcement and accident response, city action required in joint approval of restrictions (parking , bikes...)**

# **Bicycle Accommodation Varied**



- **Sign used where County and City agreed expressways too freeway-like, after County freeway resolution and city counsel action**
- **Signs referring to “Bicycles” removed or revised after 1989/1991 policies adopted by Board**

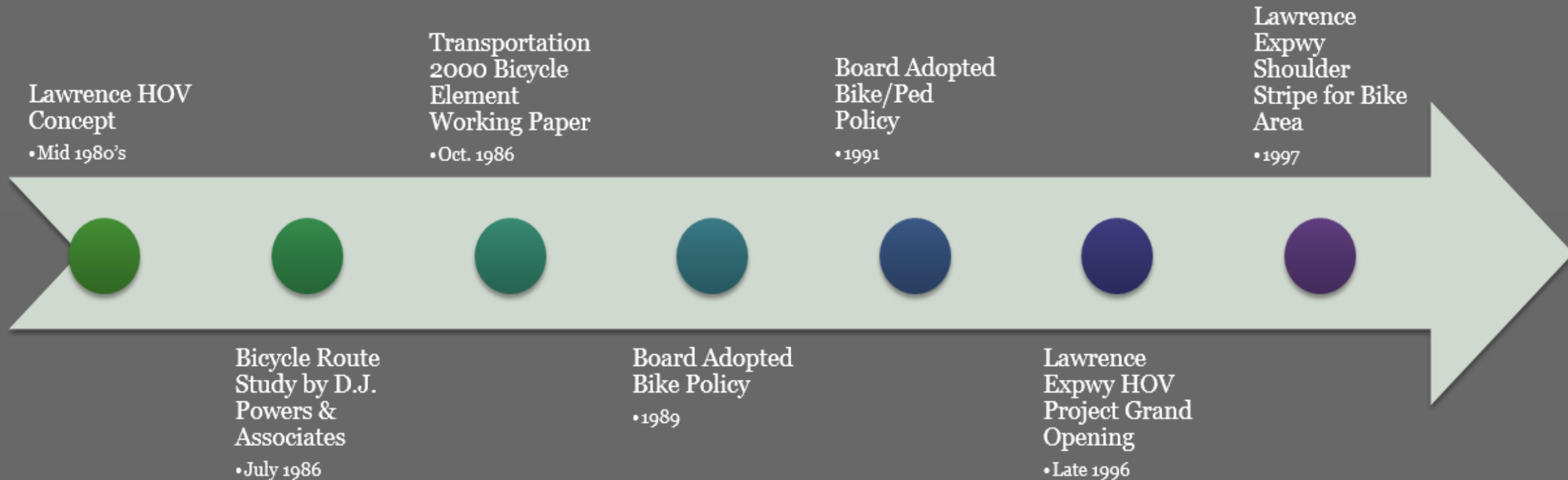
# 1986 Transportation 2000 Bicycle Element



# **Bike Prohibitions Were Removed- What Happened?**

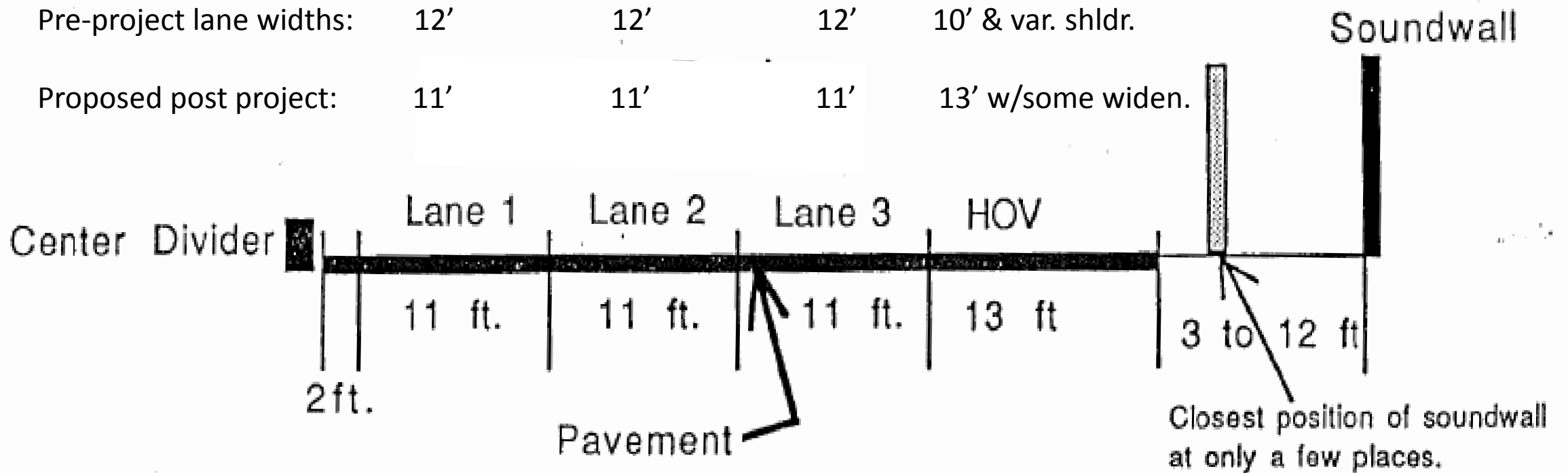
- **Lawrence Expressway (6-lanes) was proposed for low-budget widening to add HOV lanes (outside) by using existing wide shoulders.**
- **Bike community concerns that the action would be bad precedent and that expressways were better options than alternate routes.**
- **County-managed environmental study of the issue sided with bicyclists**

# History of Bicycle Accommodation: Lawrence Expressway was catalyst and rallying point





# 1988 Lawrence Expwy HOV Design



- **13 ft shared shoulder was proposed**

# **Who designed *this*?**

- **Engineering Consultant: Nolte Associates**  
**Project Engineer: Gloria Garcia (Collen)**
- **In fairness, given constrained revenue and assuming bike prohibitions would remain, the plan was logical, efficient. County provided direction to consultant.**

## **Game changer...**

- **Federal demonstration grant provided for costs of additional widening**

# 1986 Lawrence Expwy and Alternative Routes for Bicycles by David J. Powers & Associates

## Conclusion:

Although there are other north-south roadways [than] ...the expressway, conditions such as on-street vehicular parking and numerous driveways and cross-streets make them **less suitable for bicycle commute use than Lawrence Expressway.**

# And thus the policy statements (1991):

## BICYCLE USE ON EXPRESSWAYS:

### ° Board Policy Statement:

At its meeting on October 17, 1989 the Santa Clara County Board of Supervisors adopted the following statement of policy regarding bicycle use on expressways.

The Santa Clara County Board of Supervisors is supportive of action by Cities to allow bikes on expressways.

### ° Agency Policy:

It is the policy of the Transportation Agency to encourage the cities to remove the bicycle prohibition signs, except where the shoulder area is less than four (4) feet wide:

# 1991 Policy on Bicycle & Pedestrian Usage of Expressway

- The Board of Supervisors is committed to accommodating pedestrians, bicycles, and automobiles wherever possible, subject to safety considerations and fiscal constraints.
- The **Transportation Agency** is committed to **accommodating all modes of traffic** on County Expressways, subject to safety considerations and fiscal constraints.



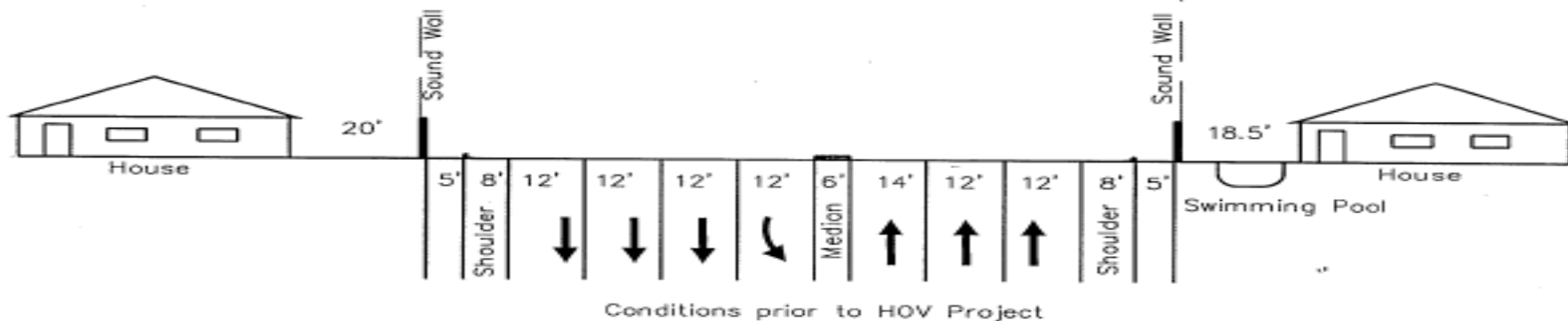
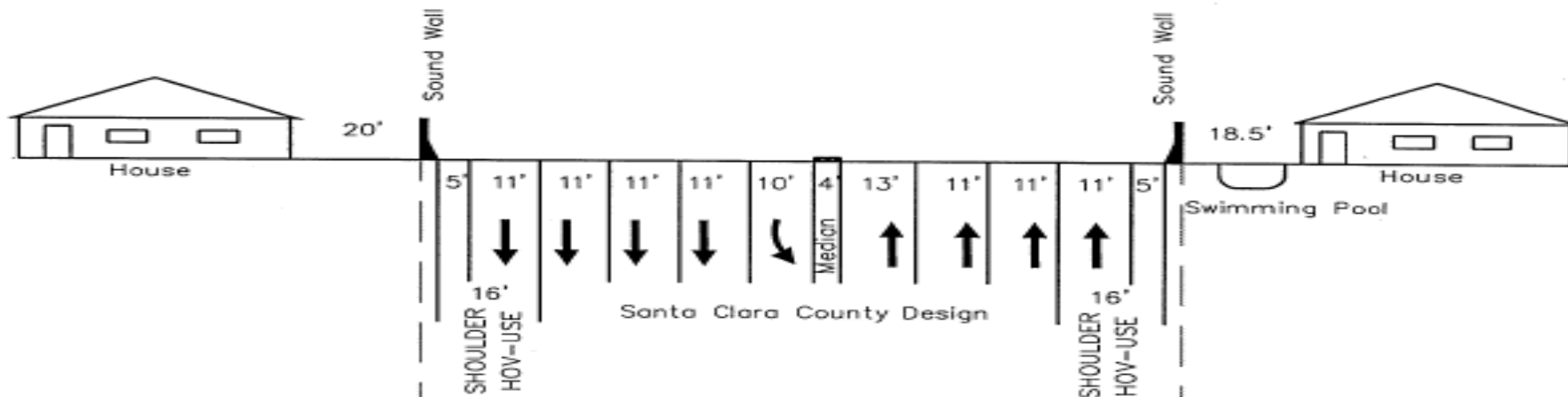
# LAWRENCE EXPRESSWAY HOV PROJECT Cross Sections Near Poinciana/Cabrillo

Winner!

No R/W

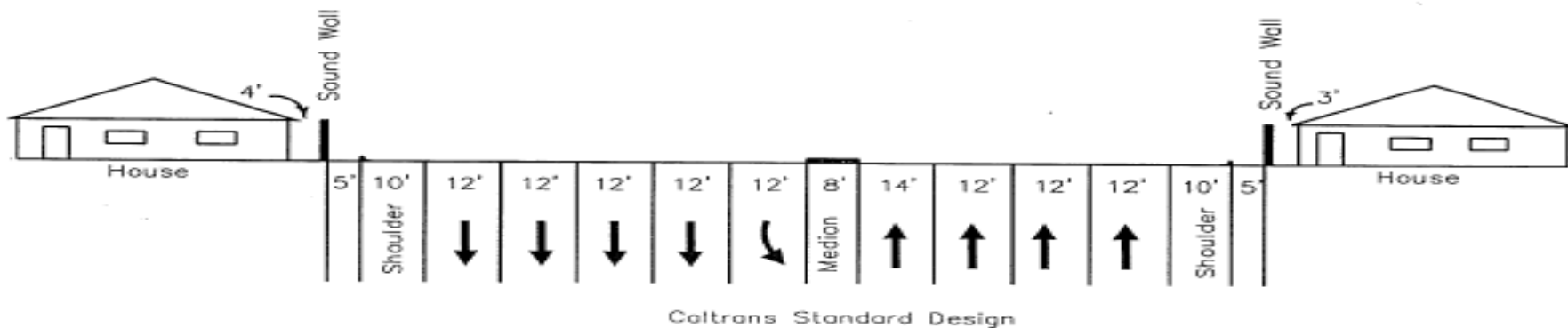
Paved wall to wall

Peds on parallel rds.

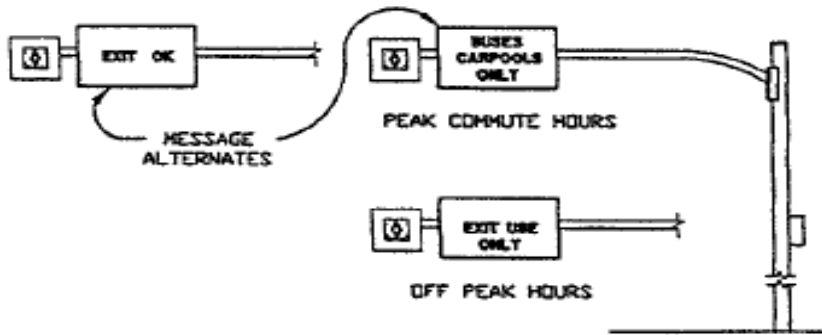
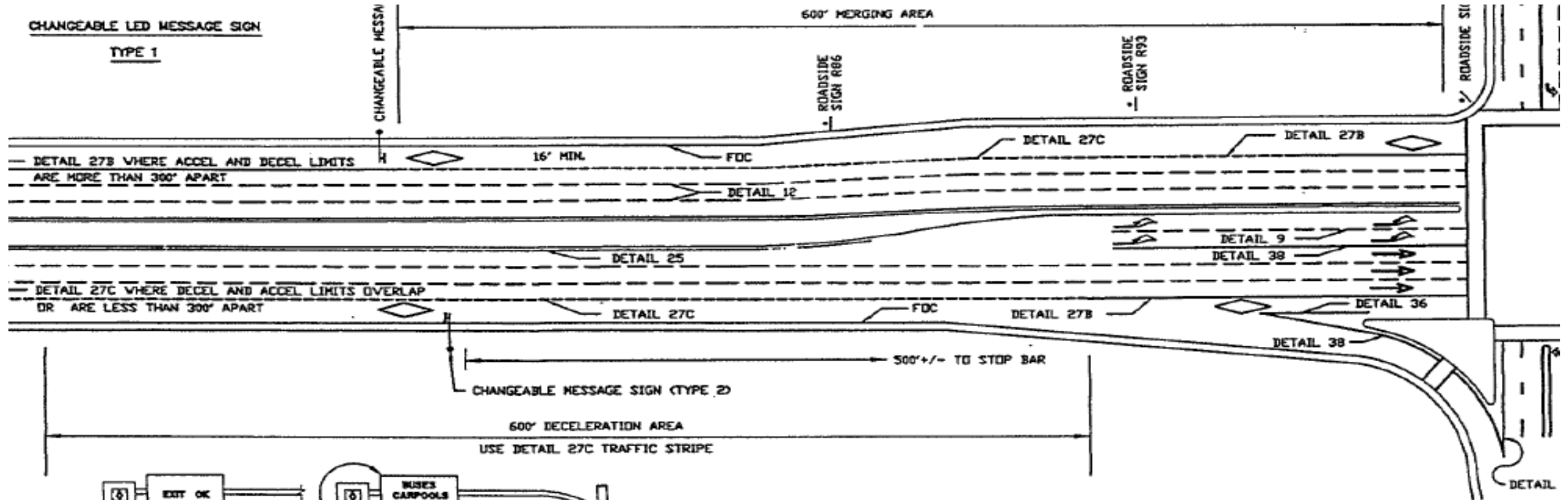


Pre-project

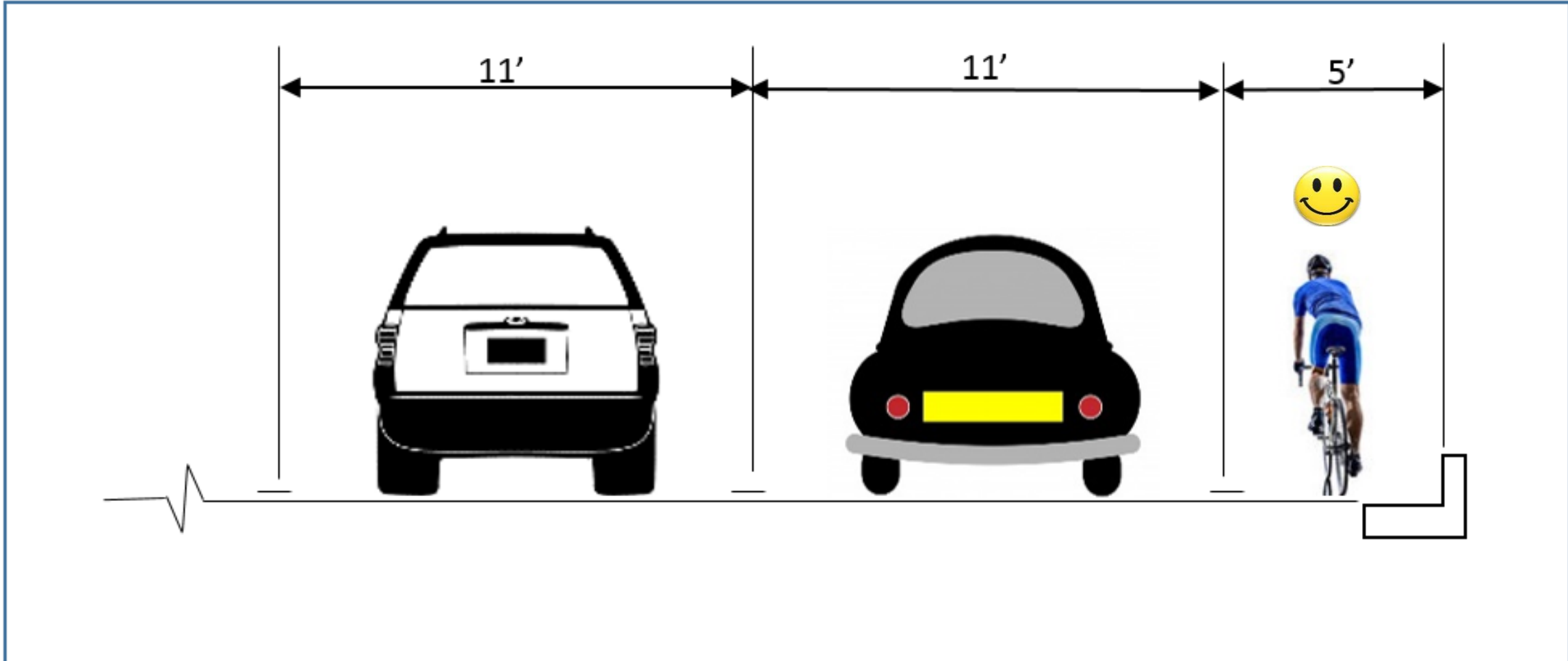
Standard  
widening  
consumes  
backyard



CHANGEABLE LED MESSAGE SIGN  
TYPE 1



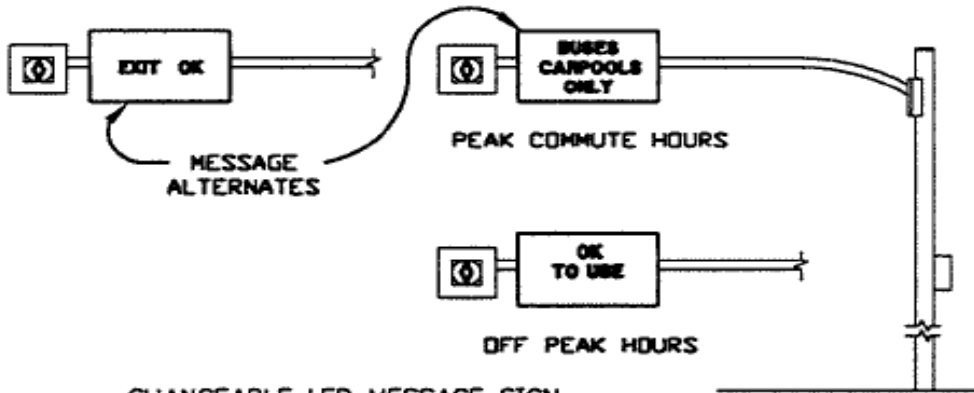
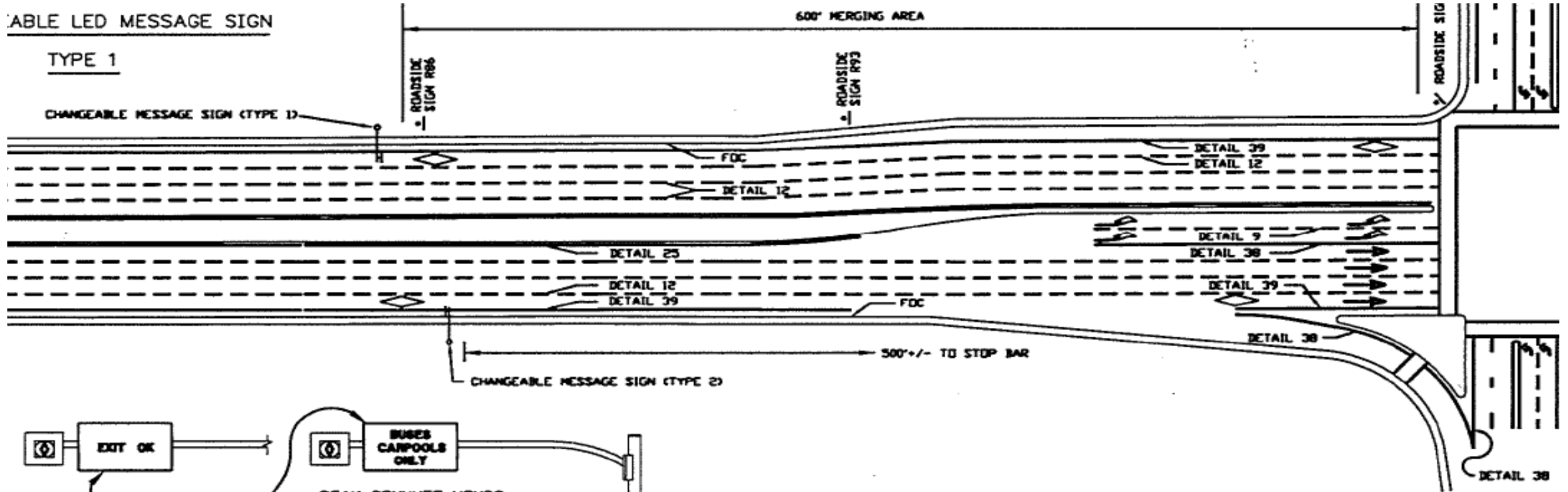
CHANGEABLE LED MESSAGE SIGN





CHANGEABLE LED MESSAGE SIGN

TYPE 1



CHANGEABLE LED MESSAGE SIGN

TYPE 2

# Policy Documentation and Approval

- **Expressway Study Process, Policy Advisory Committee, and Report (first edition 2001-2003). Process uses tech working group, PAB, City and County governing boards**
- **“Delineate, don’t designate”**
  - **Provide wide shoulders: 6’- 8’**
  - **Bike slot at stop bar**
  - **Bike slot at gore points**
  - **Use of dash in locations to continue path of bike**
  - **Provide bike presence/crossing warning signage**
  - **No bike lane pavement marking or roadside signs**
  - **Exceptions: legacy bike lanes on lower speed (Page Mill), lower volume (Foothill) expressways**



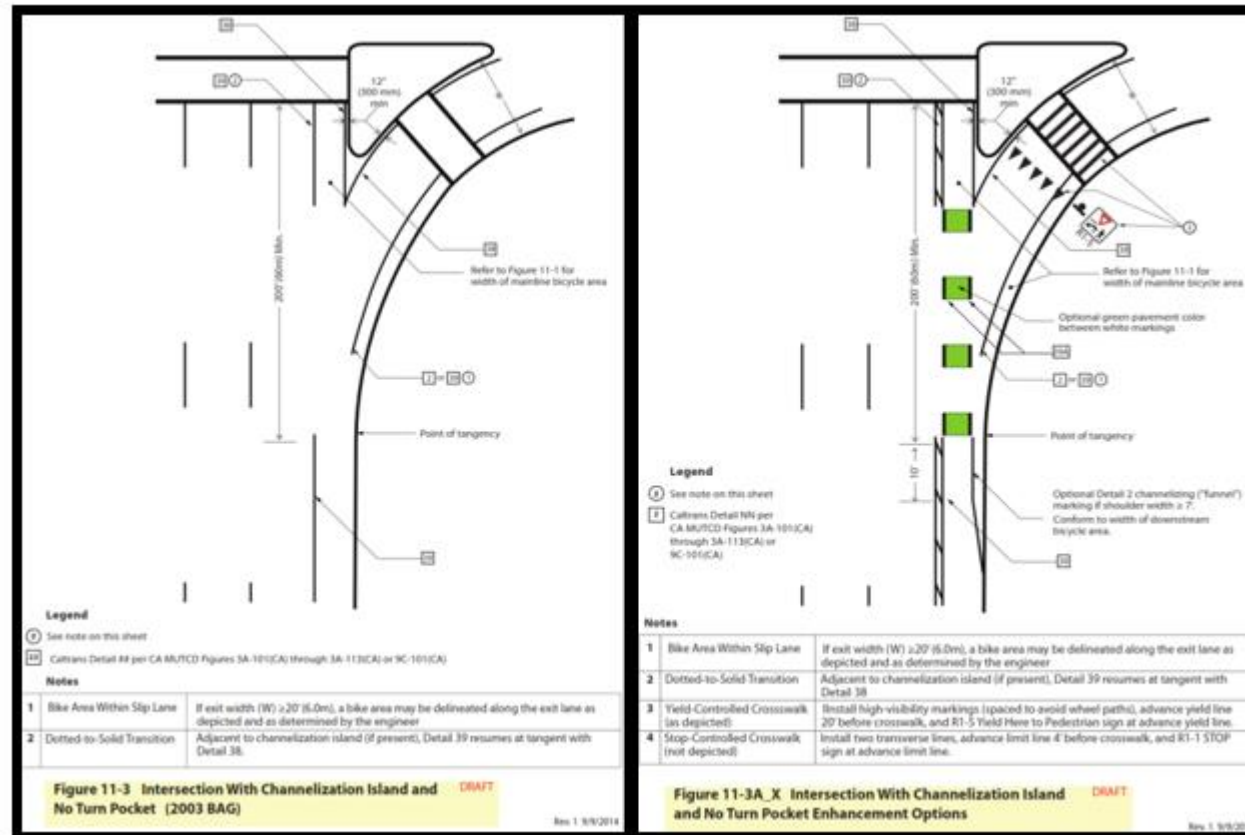
# **Current Update Process**

- **Hired subject matter expert to conduct update**
- **Drafts to VTA Bicycle & Pedestrian Advisory Committee for comment**
- **Led by County Transportation Planner, working closely with County Traffic Engineer**



# Potential Changes to BAG

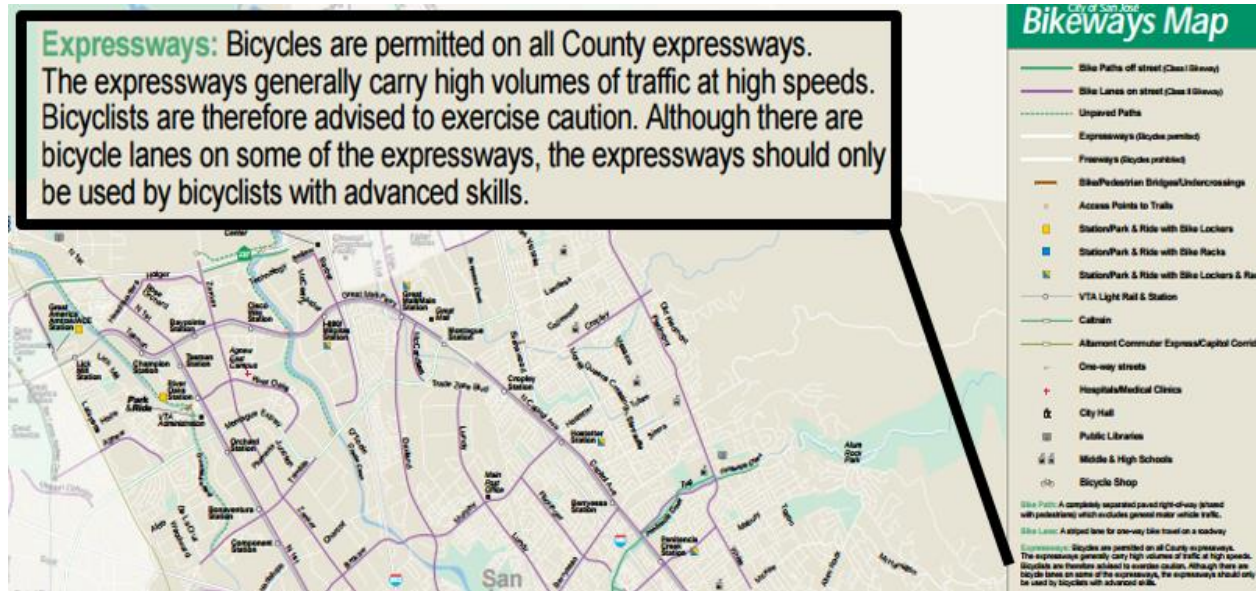
- Allow but not require use of “toolbox” elements as appropriate and needed for specific conditions, requiring judgement of Traffic Engineer.



# Current Policy Coordination

- **External messaging: expressways are for advanced bicyclists only**

**Expressways:** Bicycles are permitted on all County expressways. The expressways generally carry high volumes of traffic at high speeds. Bicyclists are therefore advised to exercise caution. Although there are bicycle lanes on some of the expressways, the expressways should only be used by bicyclists with advanced skills.

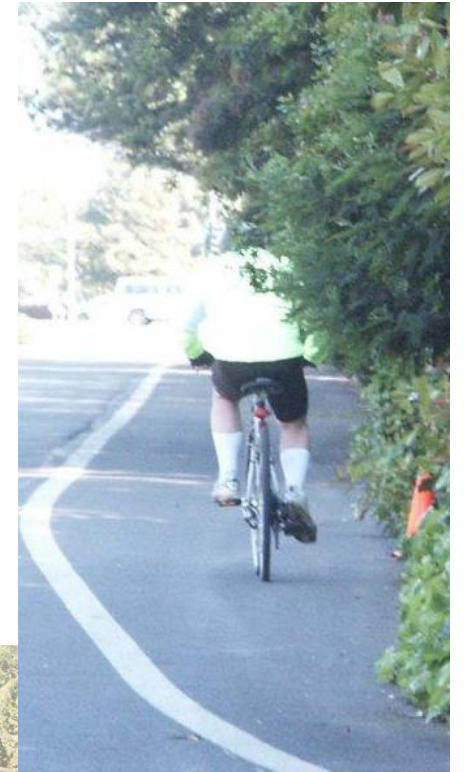


The image shows a map titled "City of San Jose Bikeways Map". It features a legend with the following items:

- Bike Paths off street (Class I/Bikeway)
- Bike Lanes on street (Class II/Bikeway)
- Unpaved Paths
- Expressways (Bicycles permitted)
- Freeways (Bicycles permitted)
- Bike/Pedestrian Bridges/Undercrossings
- Access Points to Trails
- Station/Park & Ride with Bike Lockers
- Station/Park & Ride with Bike Racks
- Station/Park & Ride with Bike Lockers & Racks
- VTA Light Rail & Station
- Catwalk
- Albany Corridor Express/Corridor
- One-way streets
- Hospitals/Medical Clinics
- City Hall
- Public Libraries
- Middle & High Schools
- Bicycle Shop

Below the legend, there are three small text boxes:

- Bike Path:** A completely separated paved right-of-way (shared with pedestrians) which excludes general motor vehicle traffic.
- Bike Lane:** A striped lane for one-way bike travel on a roadway.
- Expressway:** Bicycles are permitted on all County expressways. The expressways generally carry high volumes of traffic at high speeds. Bicyclists are therefore advised to exercise caution. Although there are bicycle lanes on some of the expressways, the expressways should only be used by bicyclists with advanced skills.



- **Internal policies, i.e. sweeping, brushing, construction traffic control**

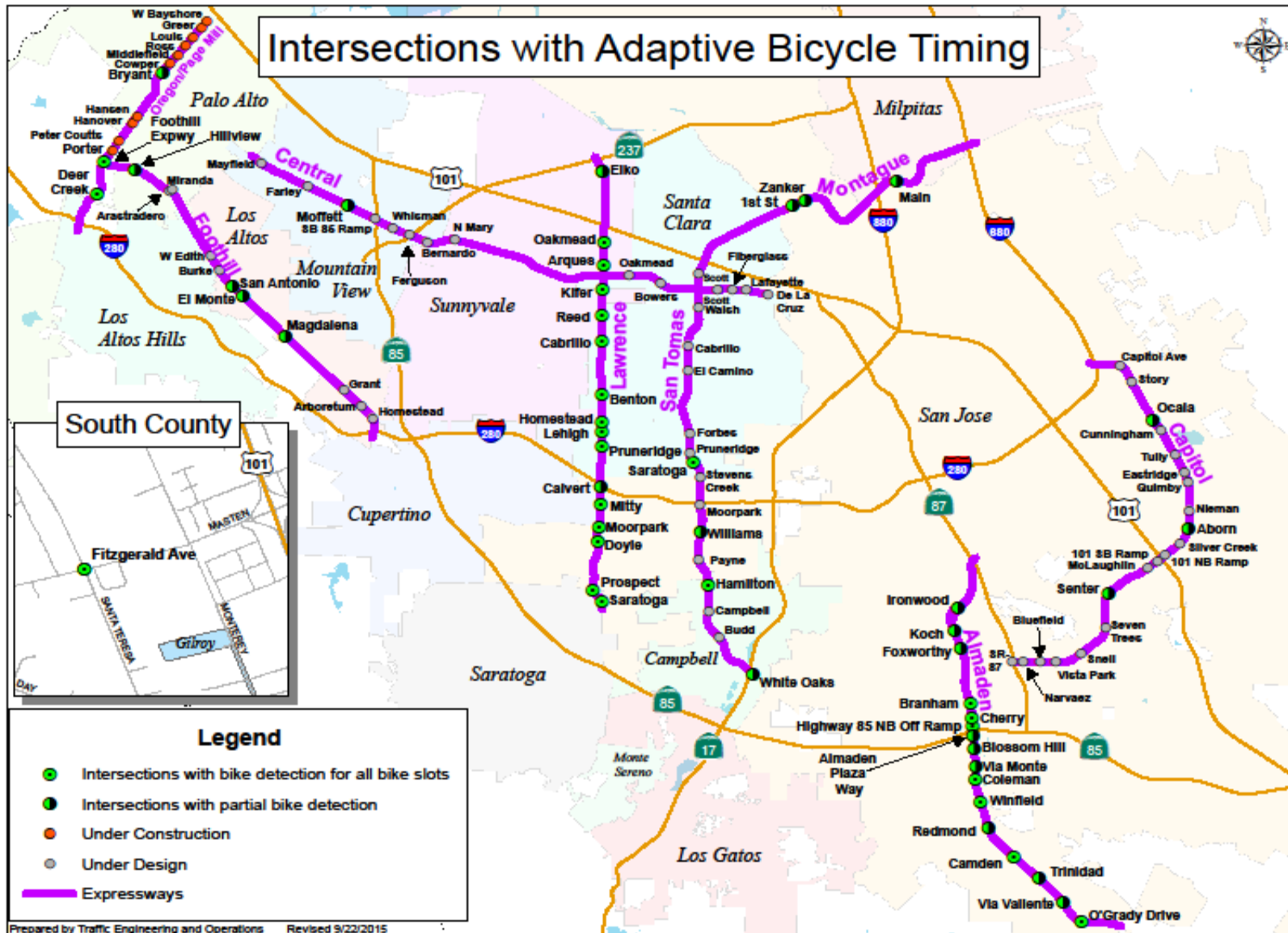
# Potential Unintended Consequences in Expwy. Context

- Square corners – Truck turning geometry can track rear wheels through pedestrian waiting area.
- Bike guidance through weaving areas – some serious bike riders object to being told where to be, want freedom to react to differing conditions, situations
- Marked crosswalks – concern with artificial sense of security and need for alertness

**Design concern:** What happens when unique treatments become standard? Is it more safety, or more routine, which becomes routinely ignored?

**Metaphor:** flu shot or antibiotics?

# Sometimes Following, Sometimes Leading



This Exhibit:  
Bike Adaptive Traffic  
Signals

See video on website:  
[www.countyroads.org](http://www.countyroads.org)

See also:  
Pedestrian Adaptive  
Traffic Signals

# Future Opportunities – Lawrence Below Grade

