Overview of Highway 37 Project

MTC P3 Summit

May 26, 2016

Transportation Authority of Marin

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SONOMA COUNTY TRANSPORTATION AUTHORITY

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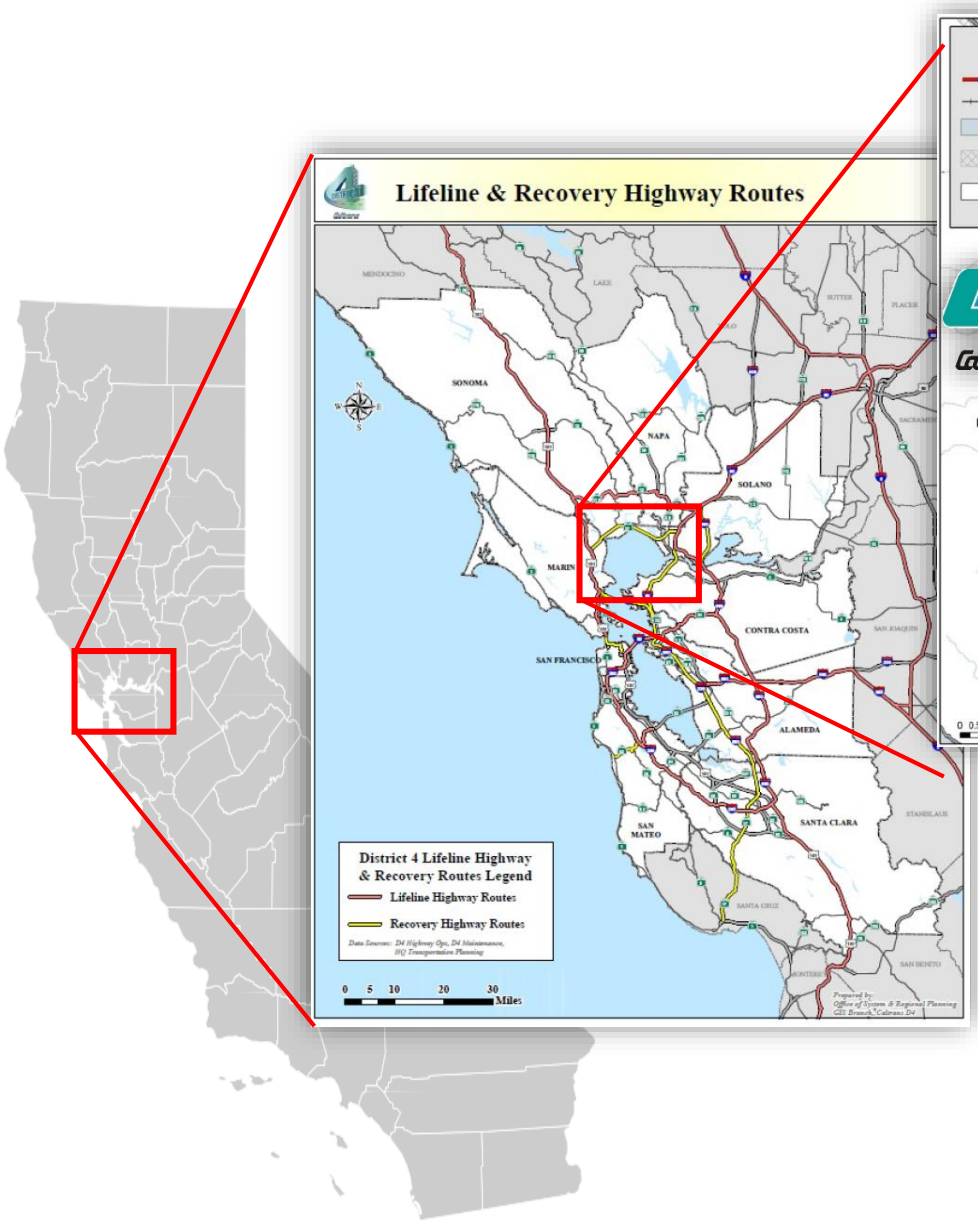
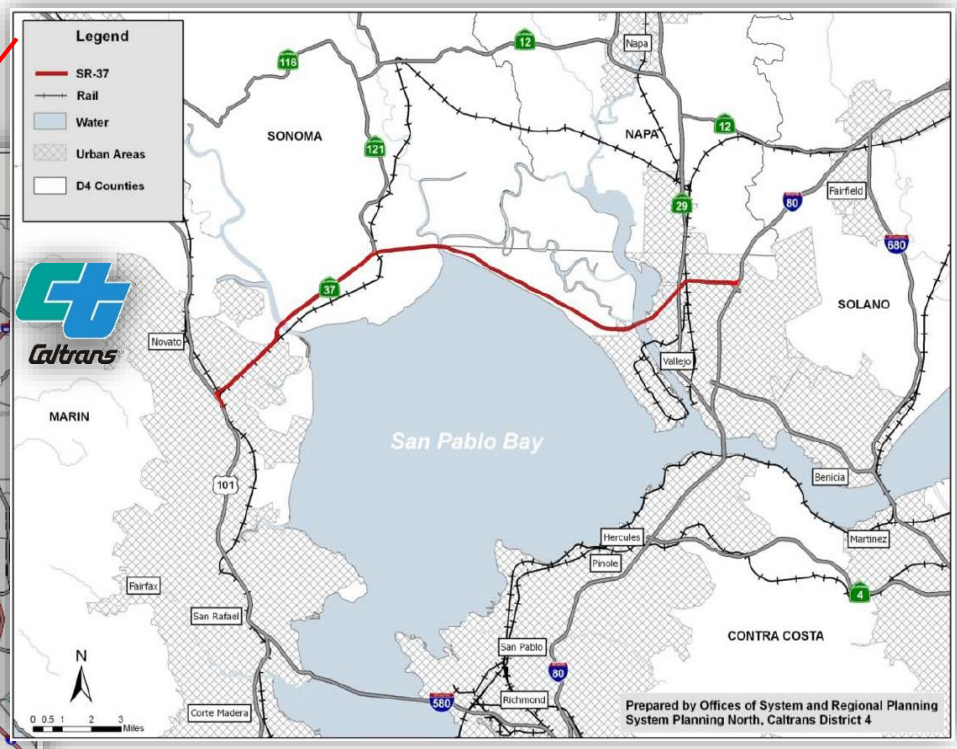
Caltrans

Project Location-Caltrans District 4

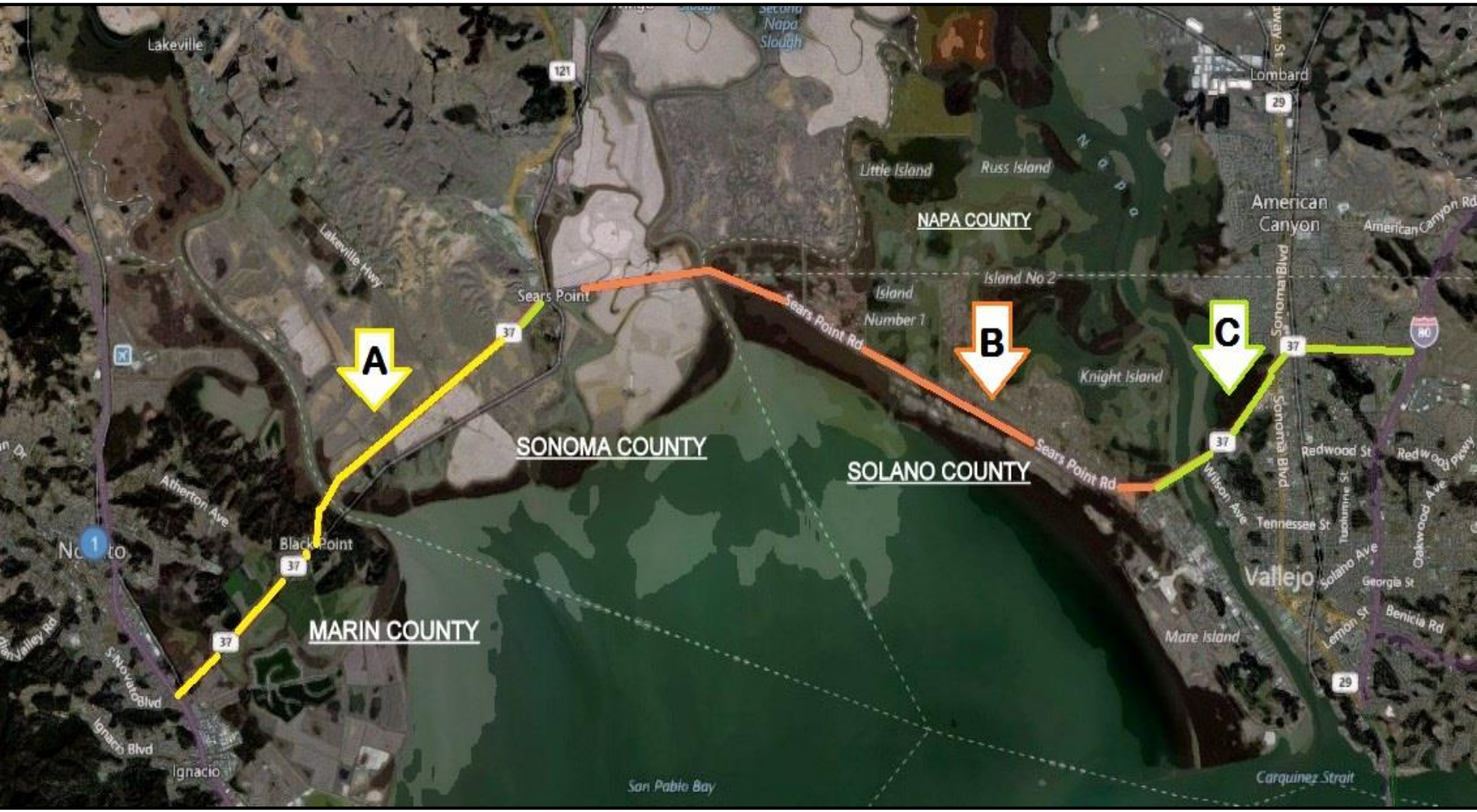




SR 37 Corridor Features

- 2 to 4 lane 21 mile corridor traversing Solano, Sonoma, and Marin Counties
- Connects I-80 in Solano County, traverses through Sonoma County onto 101 in Marin County
- SR 101 in Critical connection for North Bay freight movement, job markets, housing, tourism, and recreation
- Corridor is located in highly sensitive environmental marshland areas
- Vulnerable to Sea Level Rise
- Serves as a Recovery Route for the North Bay
- Current congestion expected to increase adding to longer peak commute times

SR 37 Corridor Characteristics



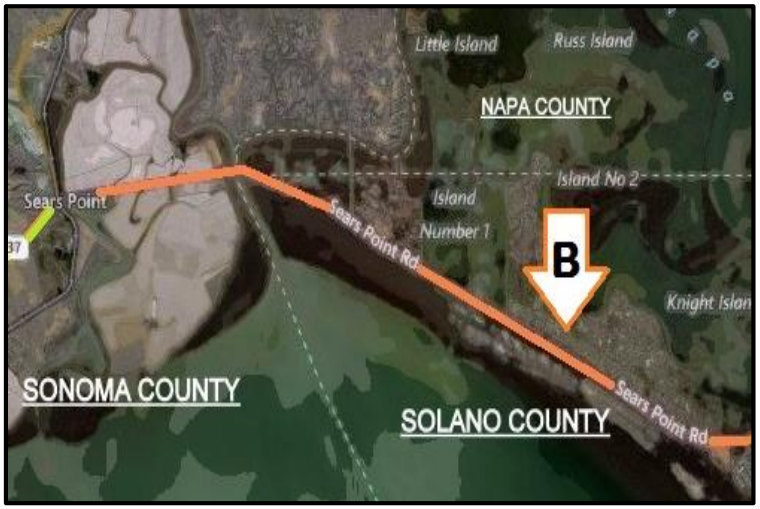
SR 37: Segment A

- Hwy 101 in Marin County to SR 121 in Sonoma County
- 4 Lane Expressway at 65 MPH
- Combination of Flat and Rolling Terrain
- **2013 AADT**: 20,300 (EB); 20,100 (WB)
- **2040 AADT** Forecast: 34,650 (EB); 37,500 (WB)
- 2012 Truck Volume: Estimated 4% to 5% of AADT
- Elevation: 1.1’ to 15.7’
- Railroad Levee

*Based on Caltrans 2015 SR 37 Transportation Concept Report

SR 37: Segment B

- SR 121 in Sonoma County to Mare Island in Solano County
- 2 Lane Highway at 55 MPH
- Combination of Rolling and Flat Terrain
- **2013 AADT**: 20,350 (EB); 19,100 (WB)
- **2040 AADT** Forecast:35,800 (EB); 34,500 (WB)
- 2012 Truck Volume: Estimated 5% to 6% of AADT
- Elevation: 3.6’ to 11.8’



*Based on Caltrans 2015 SR 37 Transportation Concept Report

SR 37: Segment C

- Mare Island to I-80 in Solano County
- 4 Lane Freeway at 65 MPH
- Flat Terrain
- **2013 AADT:** 49,200 (EB); 45,200 (WB)
- **2040 AADT** Forecast: 56,000 (EB); 58,200 (WB)
- 2012 Truck Volume Estimated 6% to 13% of AADT
- Elevation: 8.3’ to 15.2’
- Substantial Investment in 1990’s from I-80 to Mare Island

*Based on Caltrans 2015 SR 37 Transportation Concept Report

SCTA/Airsage 2014 Summary Of Current Conditions and Samples Collected

- 33,000 vehicles per day at Sonoma – Solano county line.
- 40,000 vehicles per day in Novato
- 92,500 vehicles per day in Vallejo at junction with I-80.
- Approximately 66,000 daily trips tracked in Study Area during Sept. 2014.
- Approximately 2000 daily trips tracked moving through Hwy 37 corridor during Sept. 2014.
- AirSage applied expansion algorithms to estimate total travel through Highway 37 corridor.

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scta
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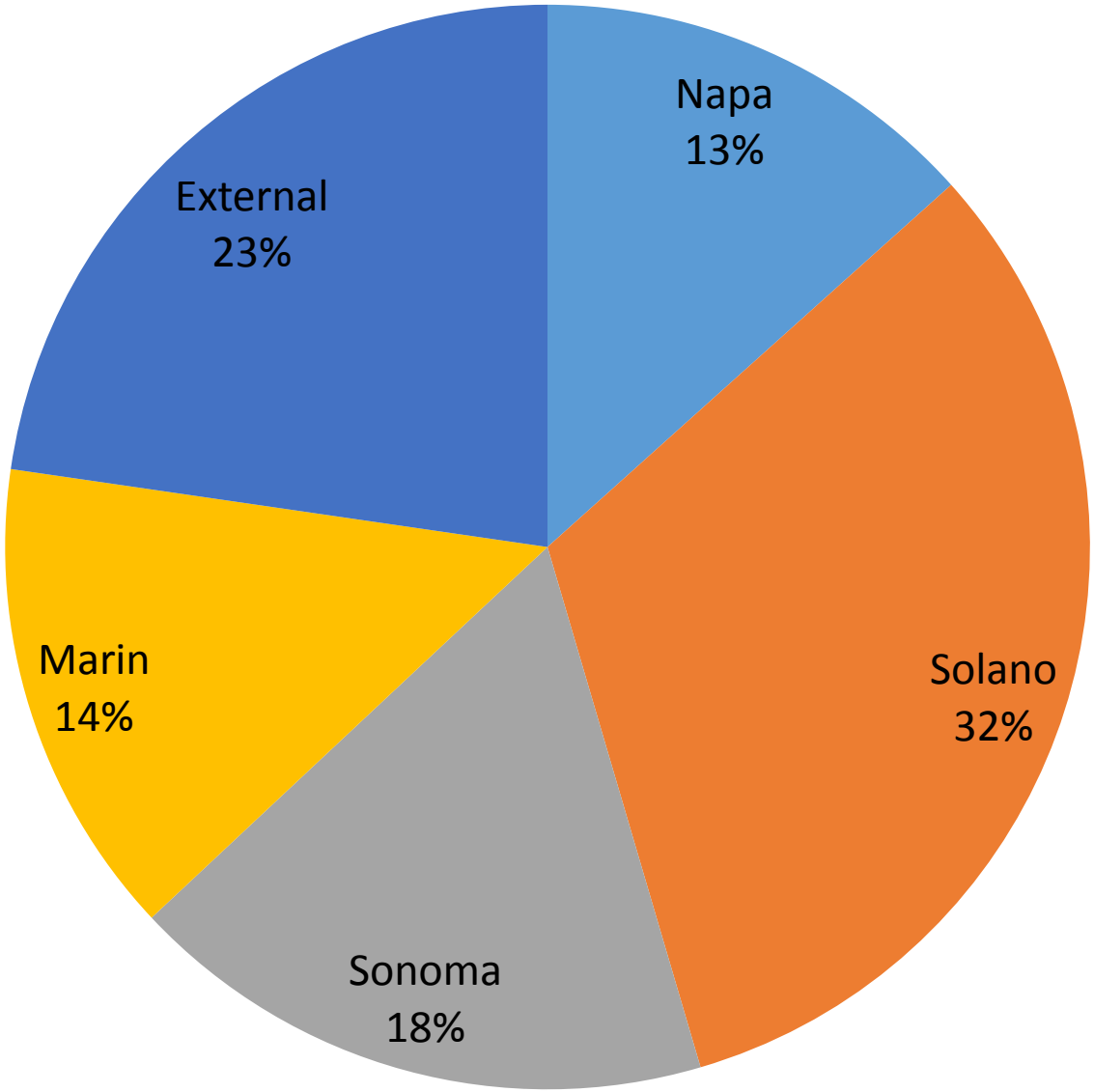
County Share of Trip Origins, Hwy 37, Avg. Weekday, Sept. 2014



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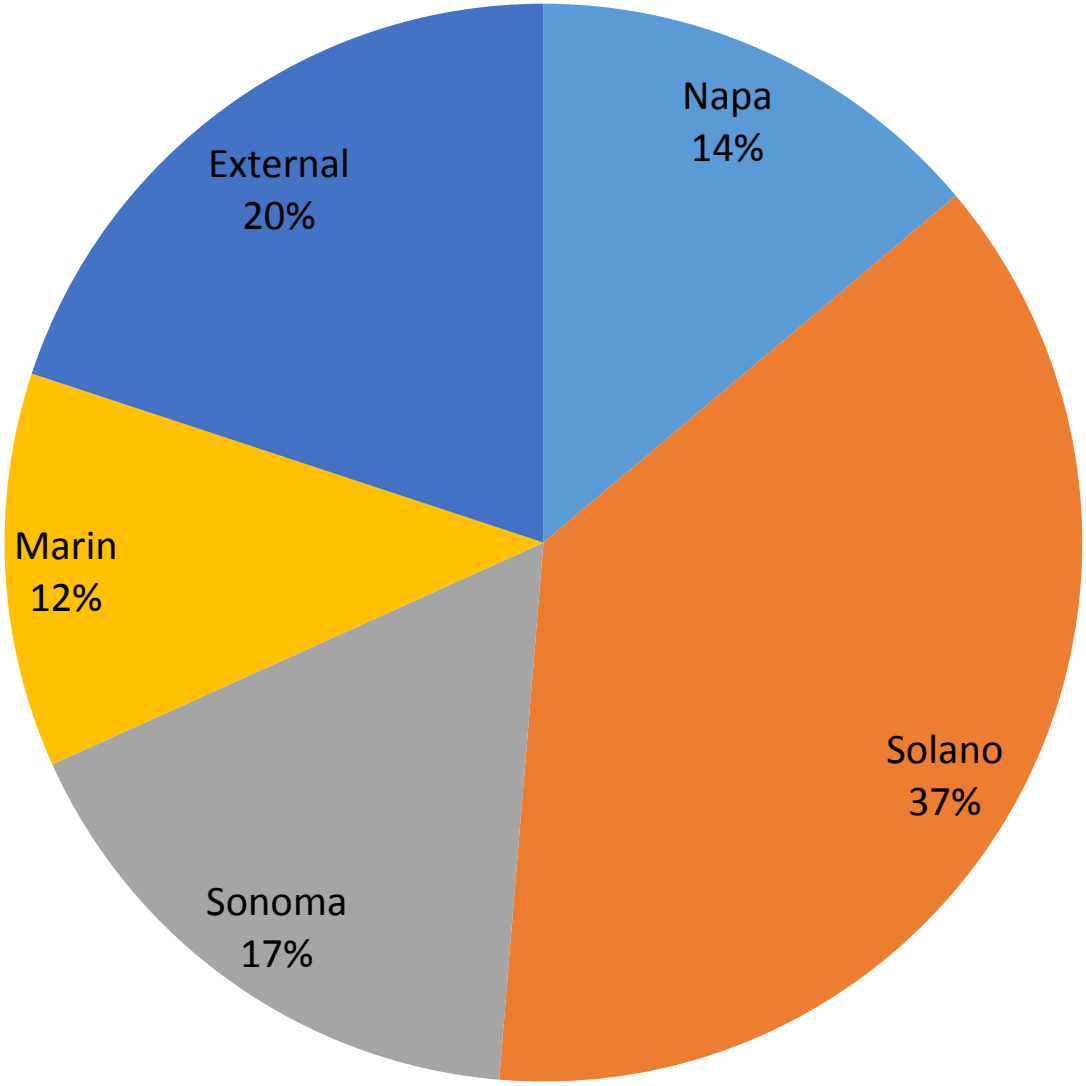
County Share of Trip Destinations, Hwy 37, Avg. Weekday – Sept. 2014



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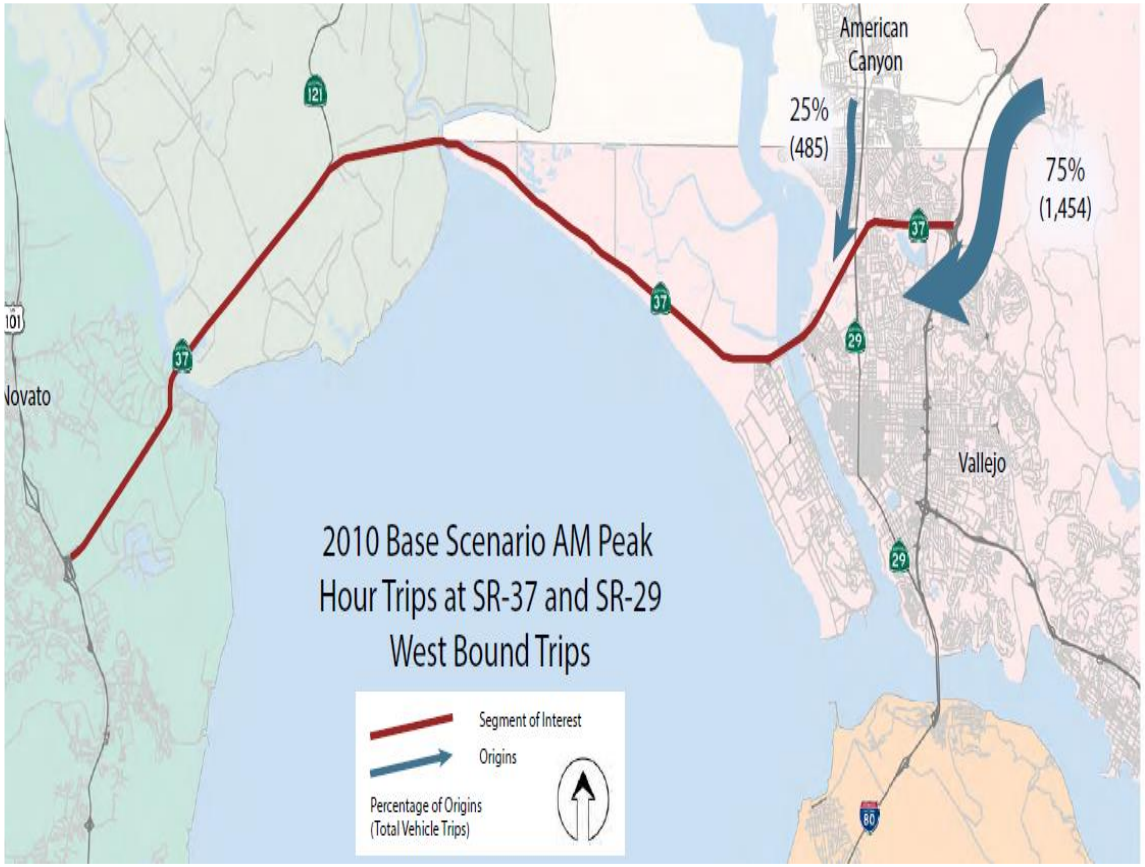
STA SR 37 Select Link Analysis (2014)

2010 A.M. Peak- West Bound (total ave trips- 1,939)-

- 25% of the trips (485) originate from SR 29/Napa/American Canyon traveling to Hwy 101
- 75% of the trips (1,454) originate from I-80/Vallejo traveling to Hwy 101



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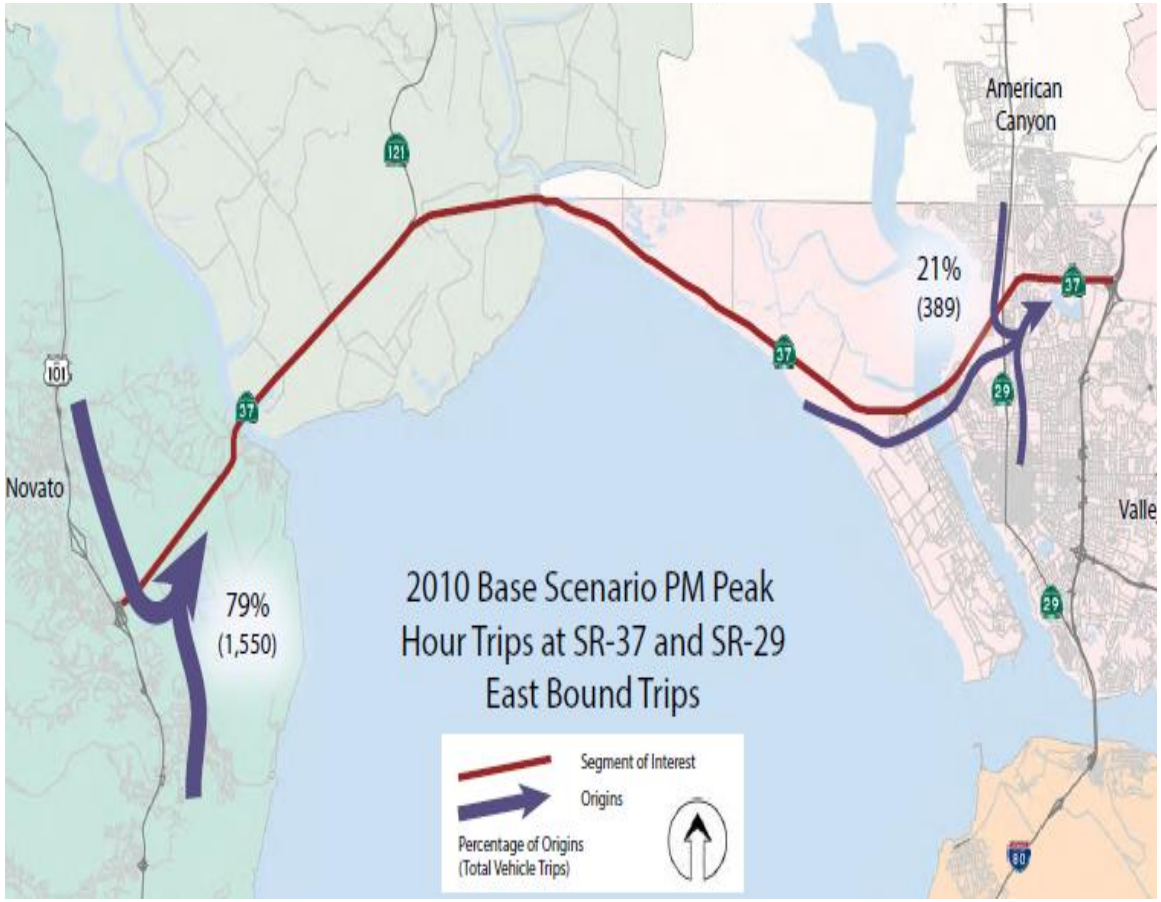
SR 37 Select Link Analysis (2014)

2010 P.M. Peak- East Bound (total ave trips- 389)-

- 79% of the trips (1550) originate from Hwy 101 traveling to Solano County/Napa/I-80
- 21% of the trips (389) are generated from SR29/Vallejo traveling to I-80



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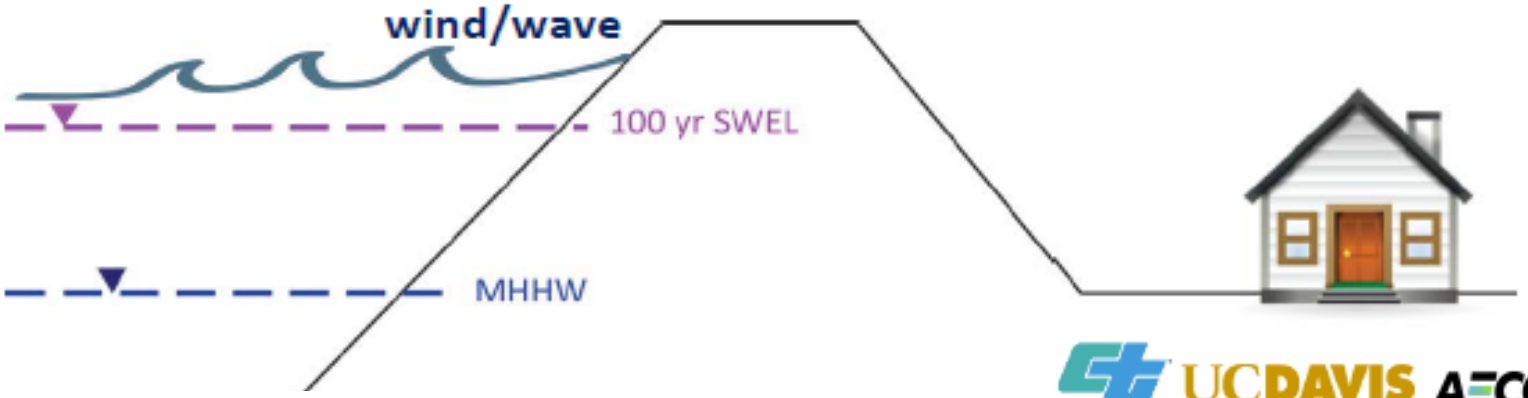
SR 37 Sea Level Rise (SLR) Challenges - Background

Water Level Analysis Conducted by UC Davis, AECOM and Caltrans

<u>Key Terms:</u>

- Mean Higher High Water (MHHW)- Typical daily high tide- 6.0-6.3 ft. Existing Conditions
- 100 yr Stillwater Elevation (SWEL) – Extreme high tide + storm surge- 9.3-9.9 ft. Vary rare temporary flooding event



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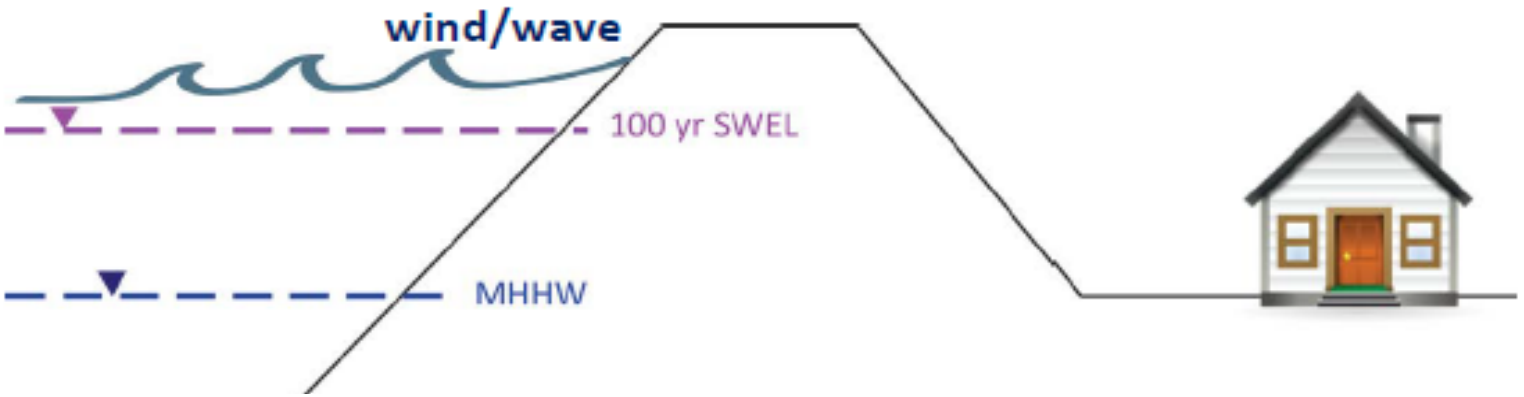
SR 37 Sea Level Rise (SLR) Challenges- Analyzed Results

Year 2050 Estimated inundation:

- MHHW + 12” SLR
- 100 yr SWEL + 12” SLR
- MHHW + 24” SLR (potentially)

Year 2100 Estimated inundation:

- MHHW + 36” SLR
- 100 Yr SWEL + 36” SLR
- MHHW + 66” SLR (potentially)



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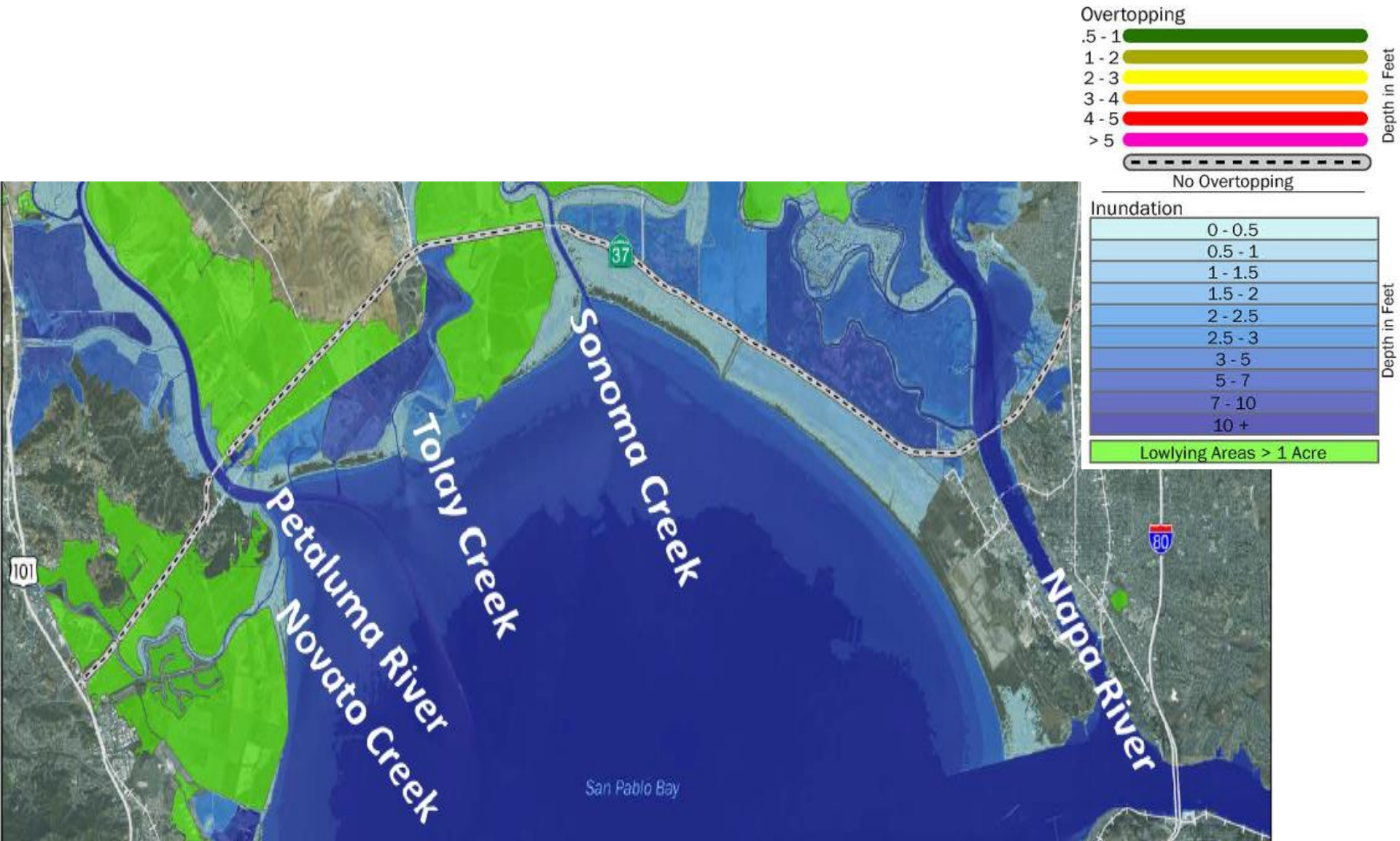
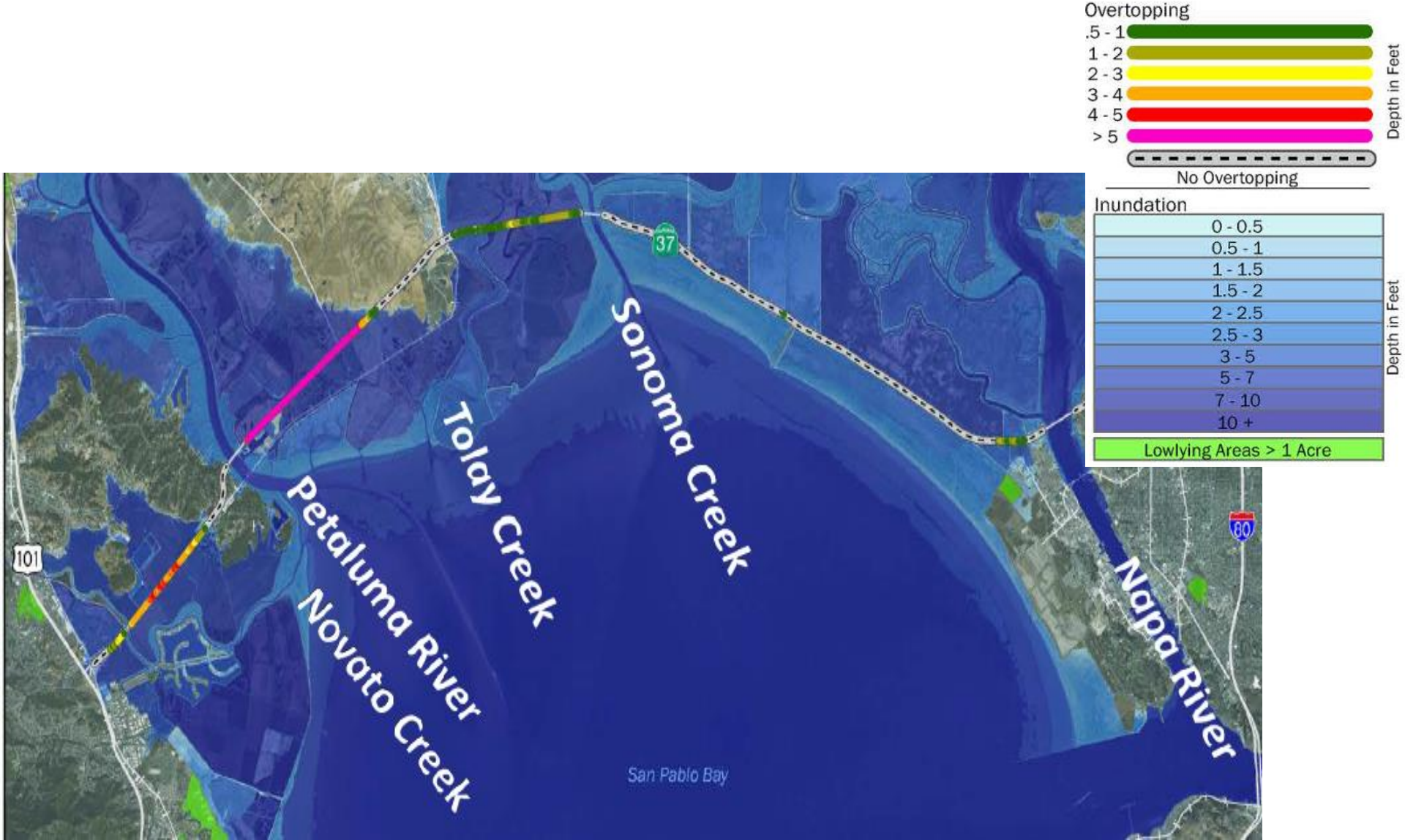
SR 37 Sea Level Rise Potential Affect –MHHW (Existing)

SR 37 Sea Level Rise Potential Affect – Year 2050 MHHW +12”

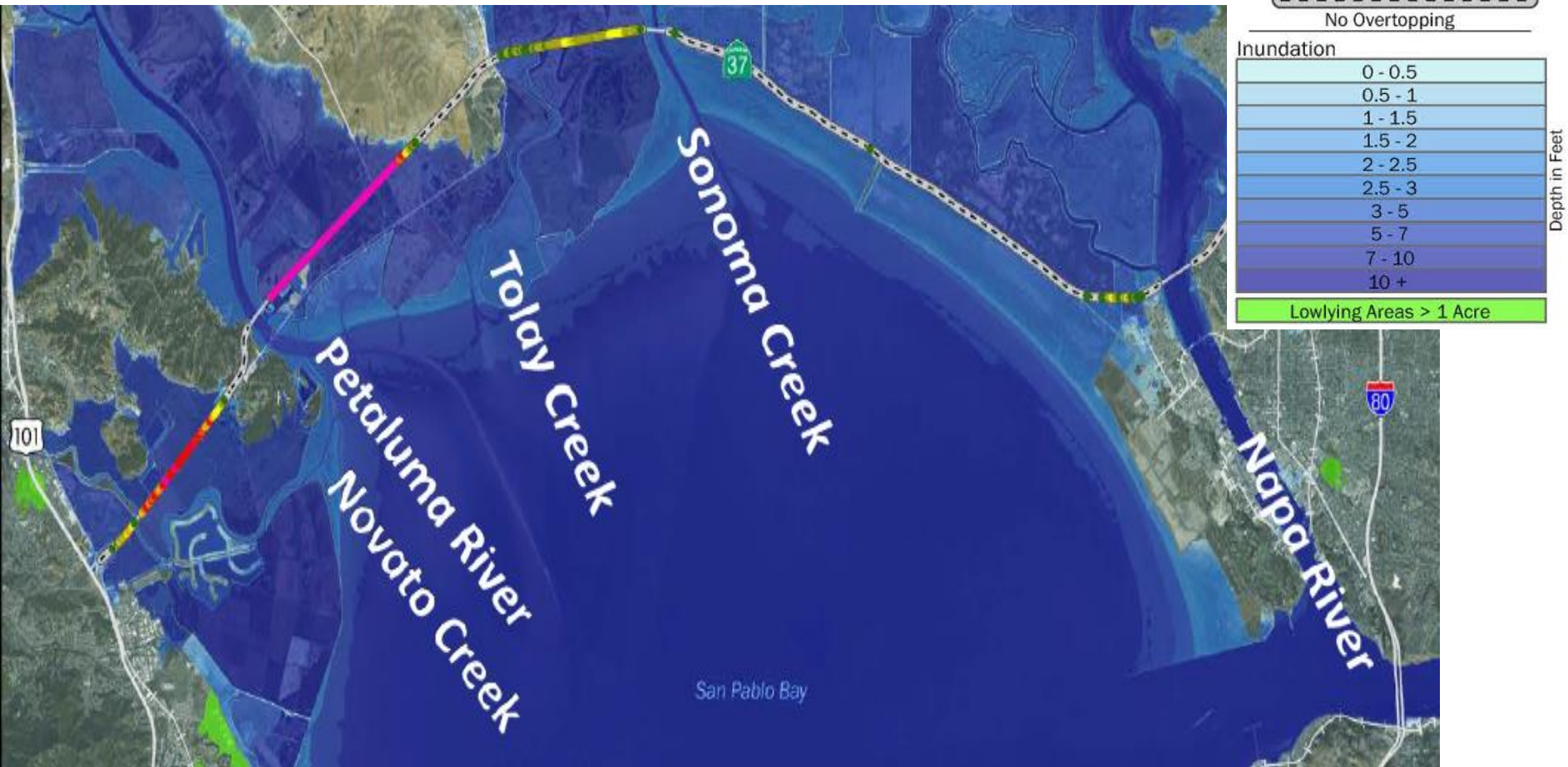


SR 37 Sea Level Rise Potential Affect – Year 2050 MHHW + 24”

SR 37 Sea Level Rise Potential Affect – Year 2100 MHHW + 36”



SR 37 Sea Level Rise Potential Affect – Existing 100 Year SWEL



SR 37 Sea Level Rise Potential Affect – Year 2100 100 yr SWEL + 36” SLR

SR 37 Sea Level Rise (SLR) Additional Challenges

- Sea levels are >8” higher than expected this winter because of El Nino
- With 4” of SLR + El Nino = 12” (next El Nino)
- One large storm + El Nino could flood Marina to Lakeville (this or next El Nino)
- 100 year SWEL (a.k.a. Storm Surge + Extreme High Tide) could occur anytime adding 9.3 to 9.9”

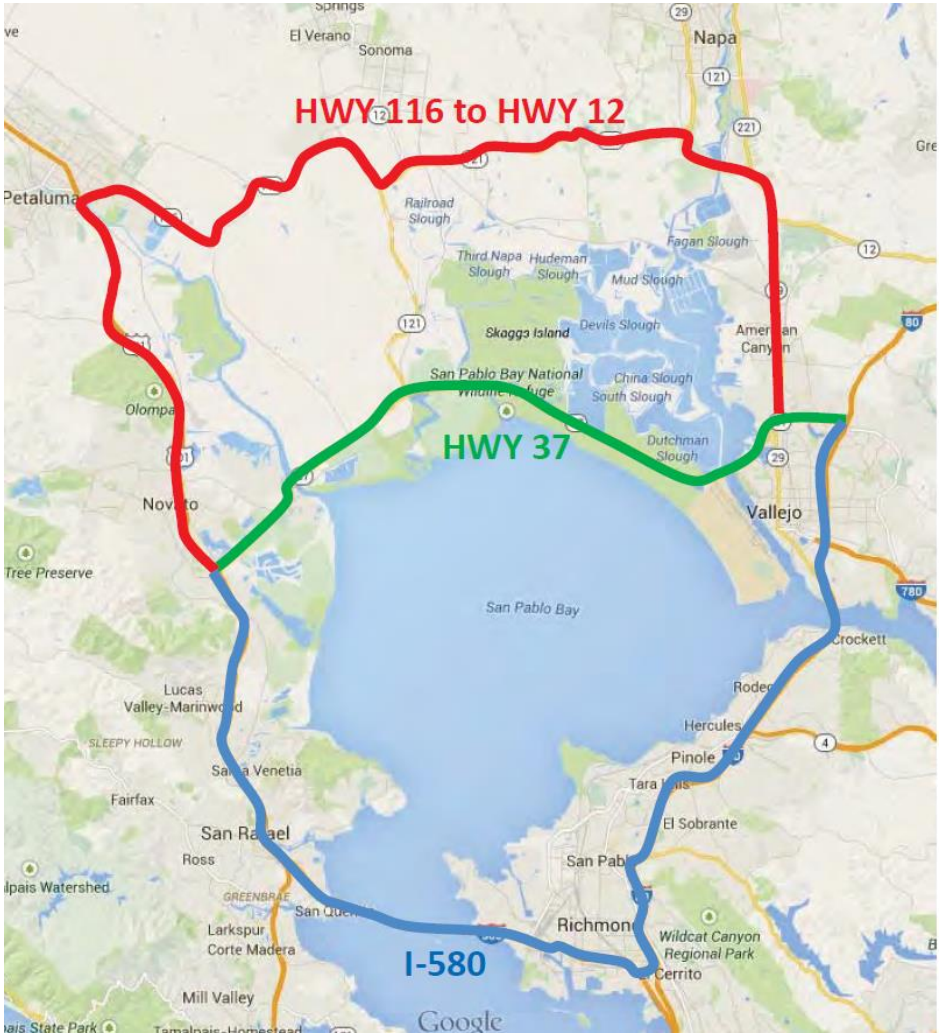
1/21/15

12/24/15

SR 37 Alternative Routes Between I-80 and 101

- SR 37 Corridor is 21 miles
- Northern Route (Hwy 12 to Hwy 116)- 44 miles
- Southern Route (Richmond Bridge – I-580)- 43 miles

SR 37 Closure would have severe congestion impact to I-80 and SR 101 and sub corridors



Adaptive Structural Scenarios Considered

- Berm/Embankment
- Causeway (over land)
- Bridge/causeway (over land-water)

Cost Estimate Comparison

Berm Embankment

Box Girder Causeway

Slab Bridge Causeway

REACH	ALTERNATIVE		
	1 - Berm/ Embankment	2 - Box Girder Causeway	3 - Slab Bridge Causeway
A	$460	$1,400	$1,300
B	$650	$2,500	$2,200
C	$150	$400	$340
TOTAL	$1,260	$4,300	$3,840

- Cost Estimate Comparison assumes preliminary total cost estimates
- SR 37 Project will be further defined to identify phasing options with timing options for elevating each segment
- SR 37 Project Definition task will result in refined cost assumptions for near, mid and long term considerations

SR 37 MOU Partnership

4 North Bay Congestion Management Agency (CMA) Memorandum of Understanding (MOU) Partnership:

"…to develop an expedited funding, financing and project implementation strategy for the reconstruction of SR 37 to withstand rising seas and storm surges while improving mobility and safety along the route"

SR 37 MOU Partnership

- SR 37 Policy Committee – 3 elected representatives from Napa, Marin, Sonoma, and Solano County CMAs
- SR 37 Executive Committee- 4 CMA Executive Director Committee
- SR 37 Project Leadership Team- 4 CMA Project Manager Technical Advisory Committee
- Other participants include Caltrans and MTC staff

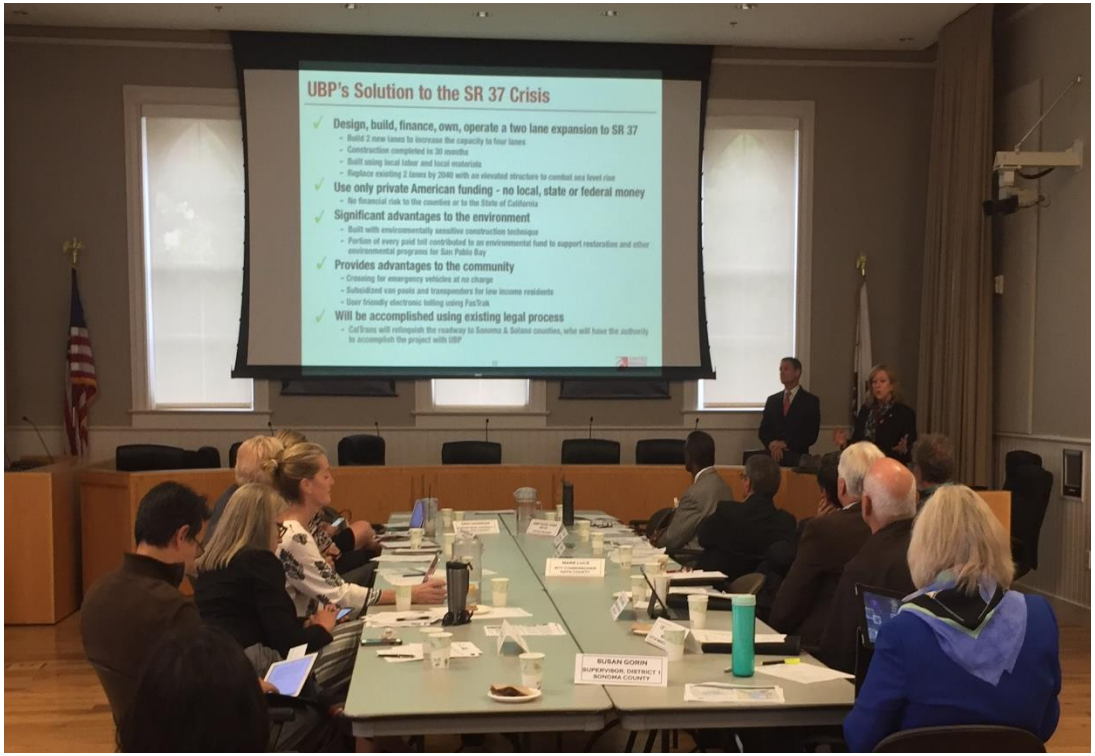
SR 37 Corridor Funding Challenges

- SR 37 not the top priority transportation project of the 4 North Bay Counties :
  - Marin County – Highway 580
  - Napa County – Highway 29
  - Solano County – Highway 80
  - Sonoma County - Highway 101

- California Highway Capacity Funding Crisis
  - Due to drop in priced based portion of the State gas excise tax
  - No new funding capacity over the next five years
  - $800 Million loss of transportation capacity revenue
  - $5.7 Billion annual maintenance fund shortfall for system repairs on existing State Highway System
  - $7.8 Billion annual maintenance fund shortfall for local streets and roads

SR 37 Financial Pursuits

- Public Private Partnership
- Full Privatization
- Tradition Public Financing
  - Toll Revenue Bonds



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Next steps

- SR 37 Corridor Financial Opportunities Analysis
- Project Definition
- Identifying Funding for Environmental Documents
- Evaluate Unsolicited Proposal for Full Private
  - Toll bridge between Hwy 121 and Mare Island
  - Private funds would fund Environmental

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Key Consideration for Next Steps

- How do we fund Environmental Documents?
- Are there similar successful P3 Projects that SR 37 can be compared to?
- What available Sea level Rise grants can this project take advantage?
- How do we evaluate unsolicited proposals for SR 37 going forward?
- What legislation is necessary to complete SR 37 through P3 financing?

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Questions?

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