# SR 37–Segment A

## from US 101 to Sears Point

Sea Level Rise

Corridor Improvement Study

TAM Transportation Authority of Marin

HNTB

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# Significant Study Effort Completed to Date

State Route 37 Integrated Traffic Infrastructure and Sea Level Rise Analysis: Final Report – October 02, 2015
UC Davies Study & AECOM engaged by Caltrans

Novato Creek Baylands – Historical Ecology Study, May 2015
SFEI Aquatic Science Center

SR 37 Transportation and Sea Level Rise Corridor Improvement Plan  September 2017
Kimley Horn & AECOM engaged by MTC

San Pablo Baylands: Ensuring a Resilient Shoreline-October 2017
State Route 37 – Baylands Group

California Highway 37 Bridge Configuration at Novato Creek for Future Sea Level Rise – January 2018
Marin County Flood Control District, Schaaf & Wheeler

# SR 37 - Segment A
# A Deeper Look

**Goals**

- Gather information from key stakeholders, interest groups and landowners
- Integrated approach to optimize hydrologic and wildlife restoration, commuters and provide bicycle pedestrian connectivity and future access
  - ➢ Develop Study Design Criteria

**Targeted Scope**

- Short study period – less than 3 months

# Stakeholder and Interest Groups Integrated in the Study

- Marin County
- Sonoma County Transportation Authority
- SMART
- Caltrans
- City of Novato
- US Fish and Wild Life
- Sonoma Land Trust
- UC Davis
- Ducks Unlimited
- Marin Audubon Society
- Coastal Conservancy

# Study Assumptions

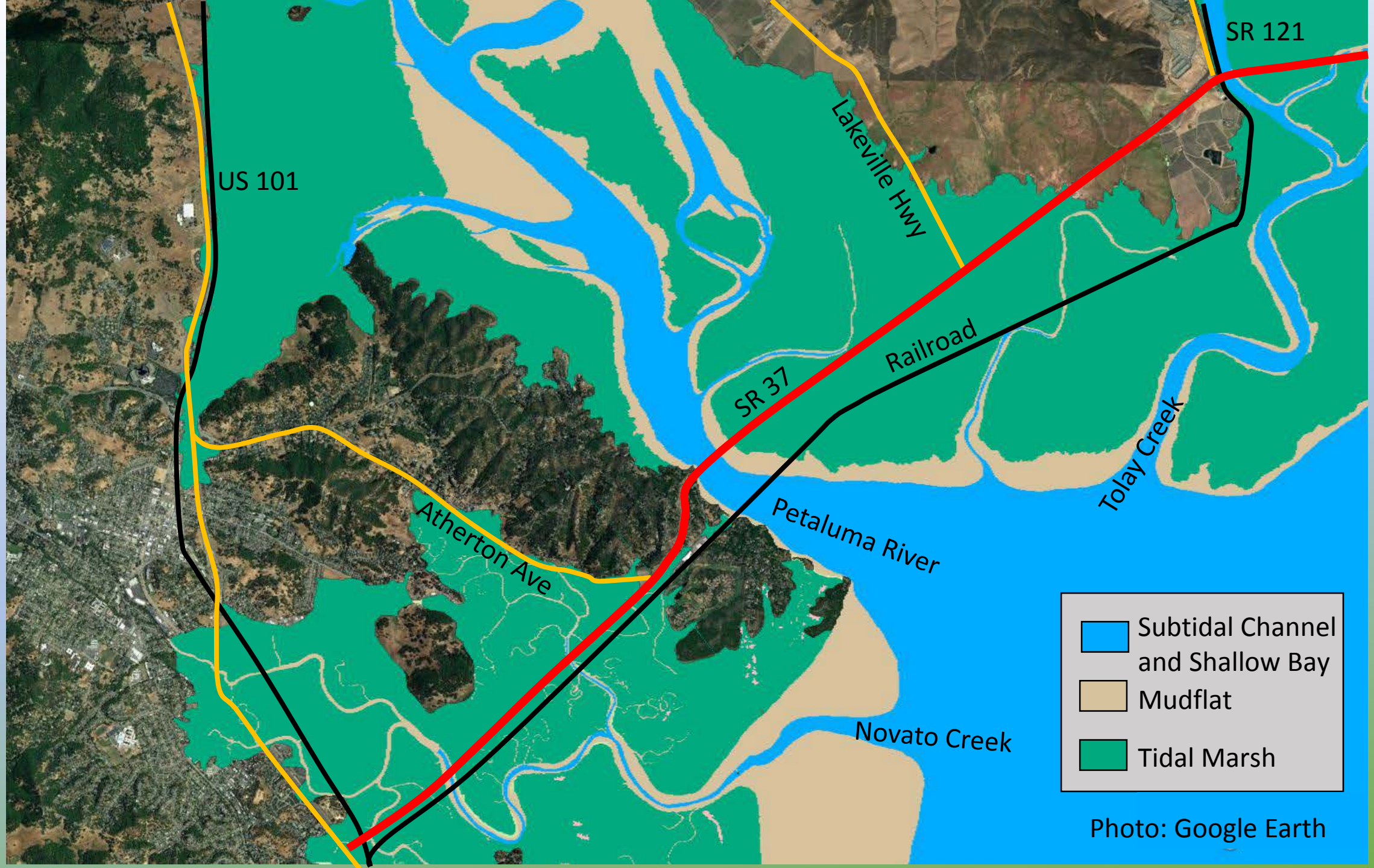
- Maintain local access for key local roads as well as the Bay Trail
- Conceptual evaluation of US 101/SR 37 interchange for Sea Level Rise
- Conceptual review of transit
- Construction staging concepts were not developed

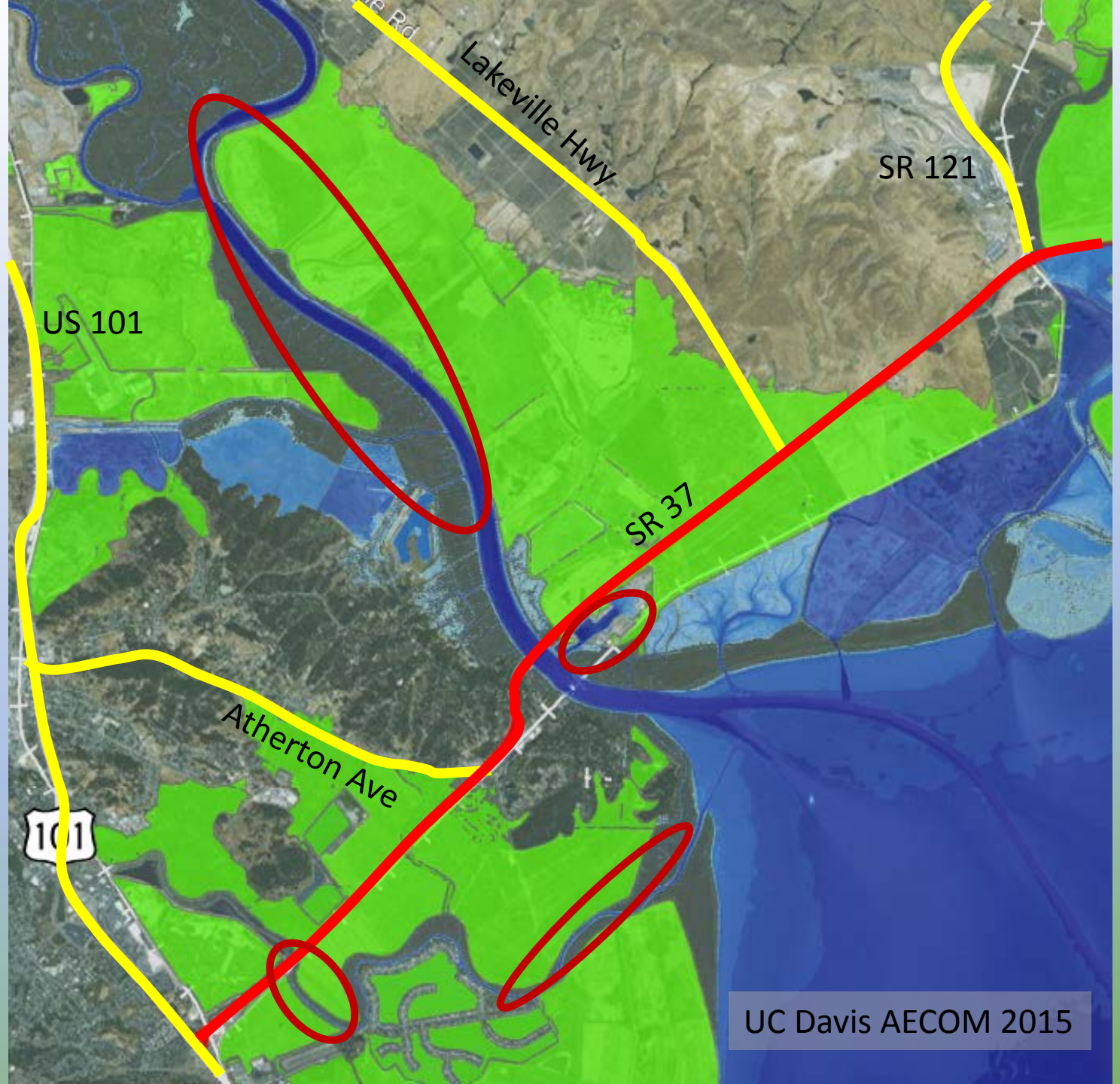
# Study Design Criteria

- Re-establish connectivity and allow for future restoration
- Design to latest Sea Level Rise (SLR) projection
- Provide a four-lane conventional highway facility including a multi-use path

# Historical Landscape – Sears Point, 1856


US Coast Survey, 1856

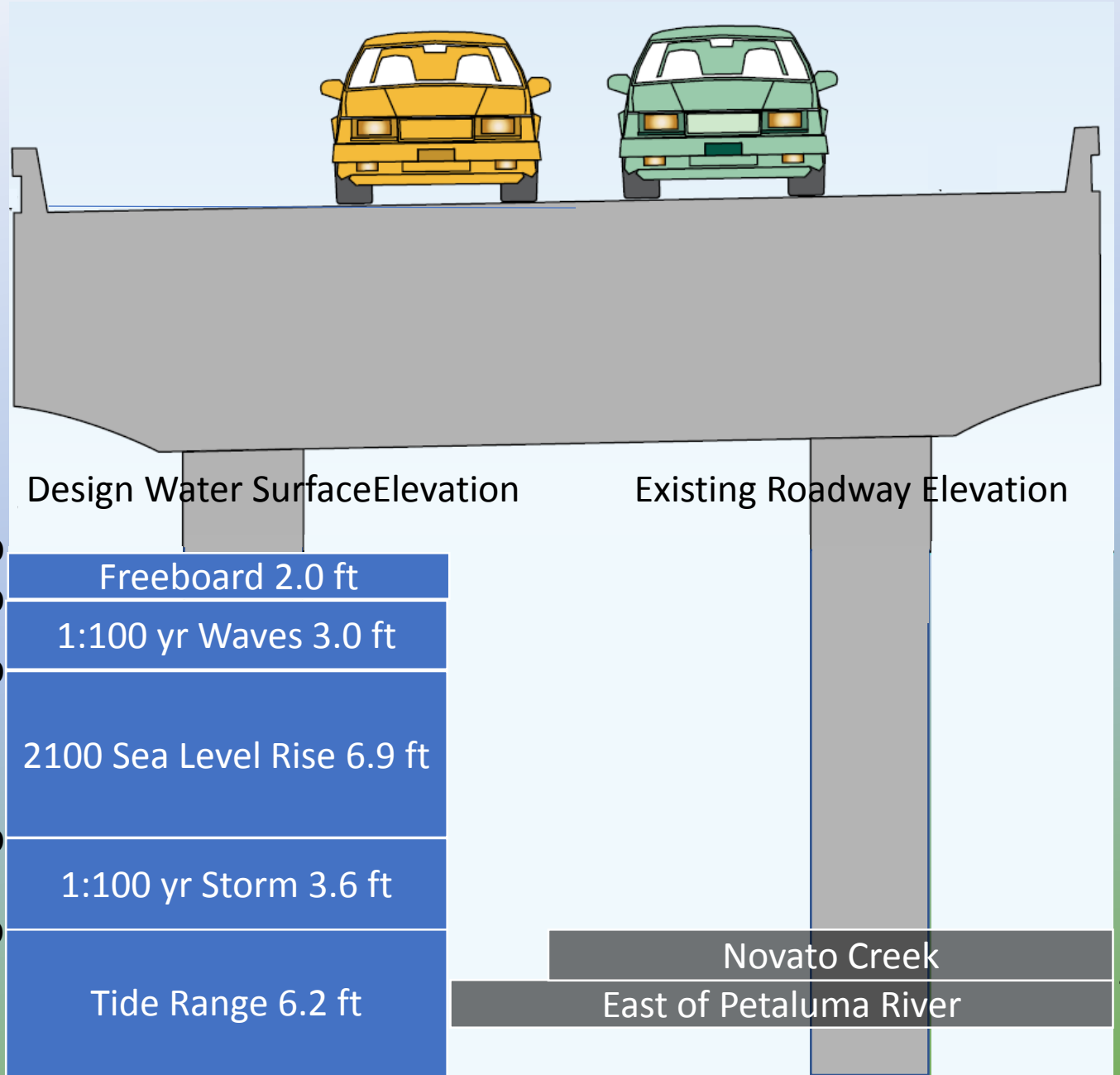

US 101
Lakeville Hwy
SR 121
SR 37
Railroad
Tolay Creek
Atherton Ave
Petaluma River
Novato Creek
Subtidal Channel and Shallow Bay
Mudflat
Tidal Marsh
Photo: Google Earth

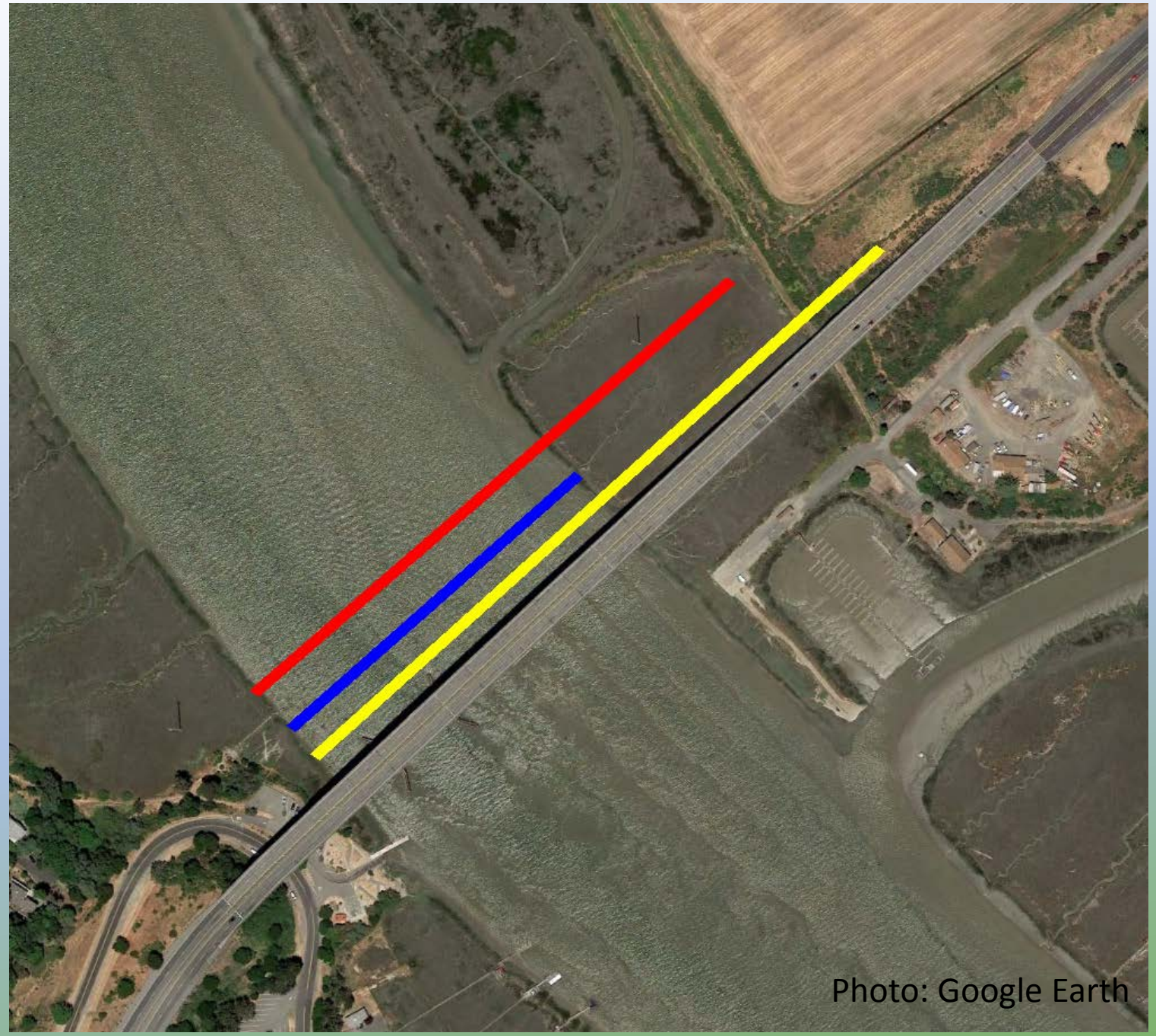



Low areas vulnerable to flooding.

Levees vulnerable to overtopping or failure.

# Water Surface Elevations






# Width of channel at Petaluma River Bridge

Historical - 1250 ft

Current - 755 ft

Future (max) - 1500 ft

# Alternatives Analyzed

Alt 1: Piled Causeway

- Elevate SR 37 on structure

Alt 2: Hybrid – Piled Causeway/Embankment

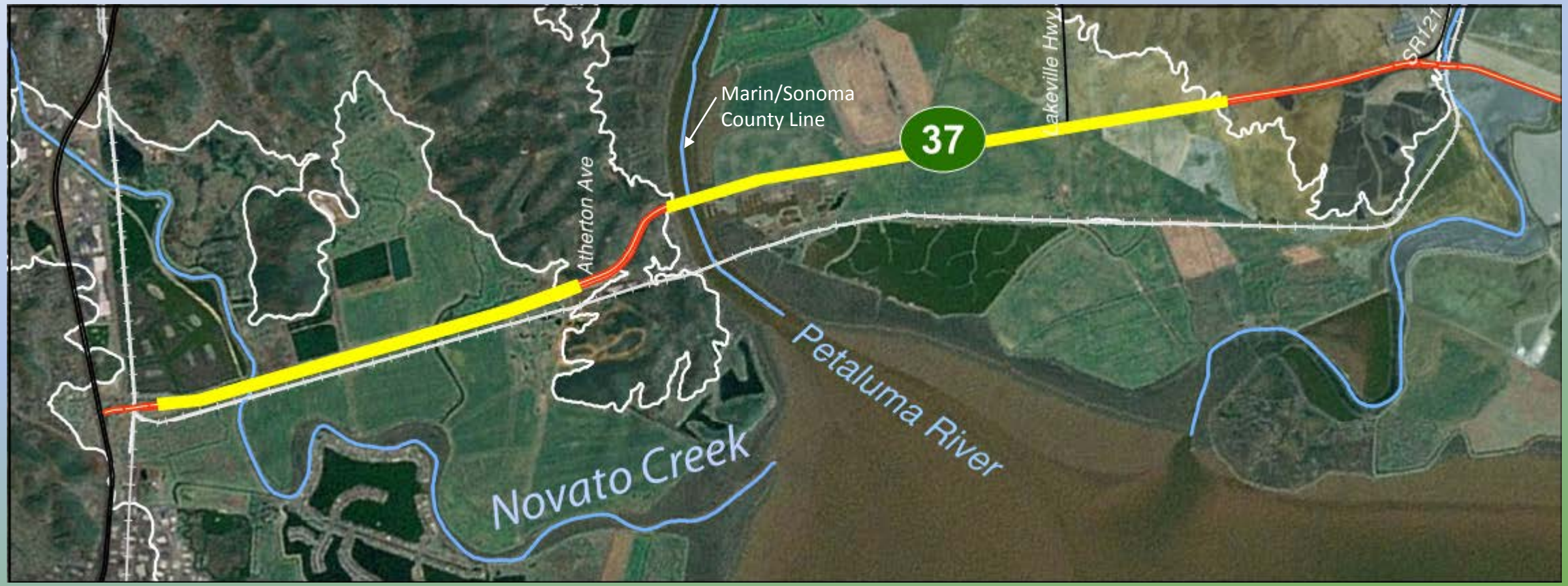
- Combination of embankment and structure

Alt 3: Novato Creek

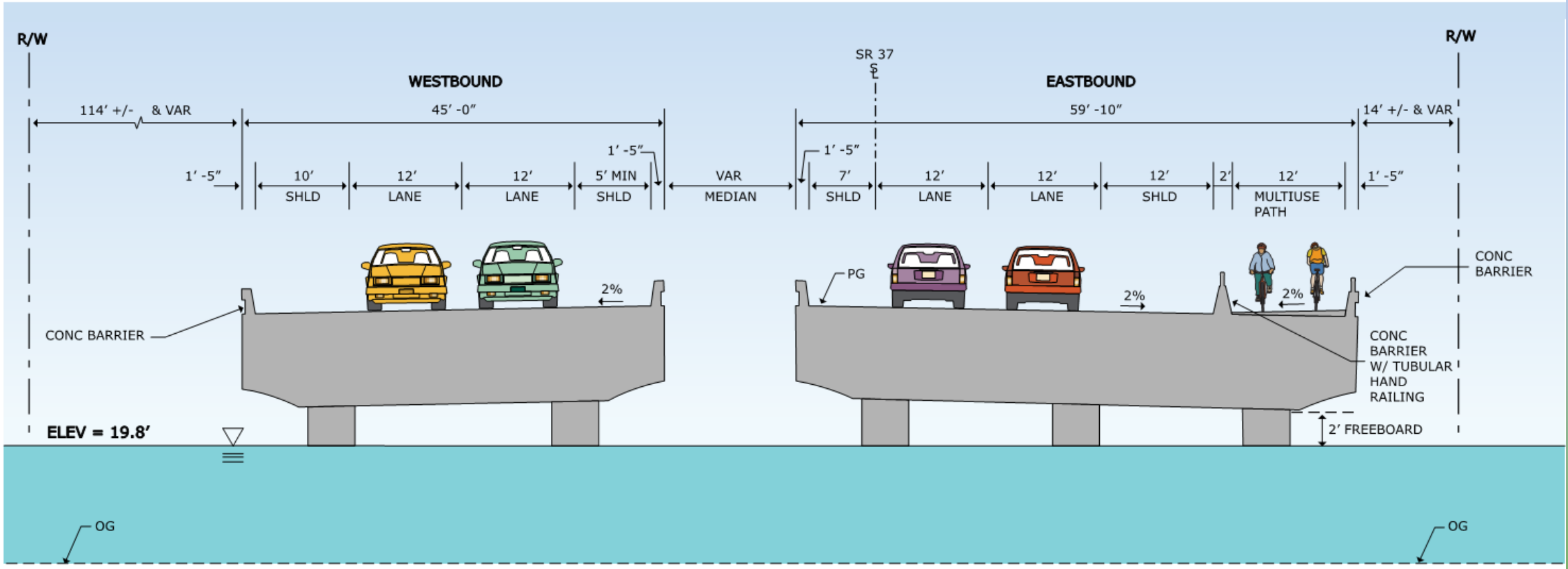
- Elevate portion of SR 37 from US 101 to past Novato Creek only

# Alternative 1 – Piled Causeway

- 5.8 miles of Piled Causeway/Bridge



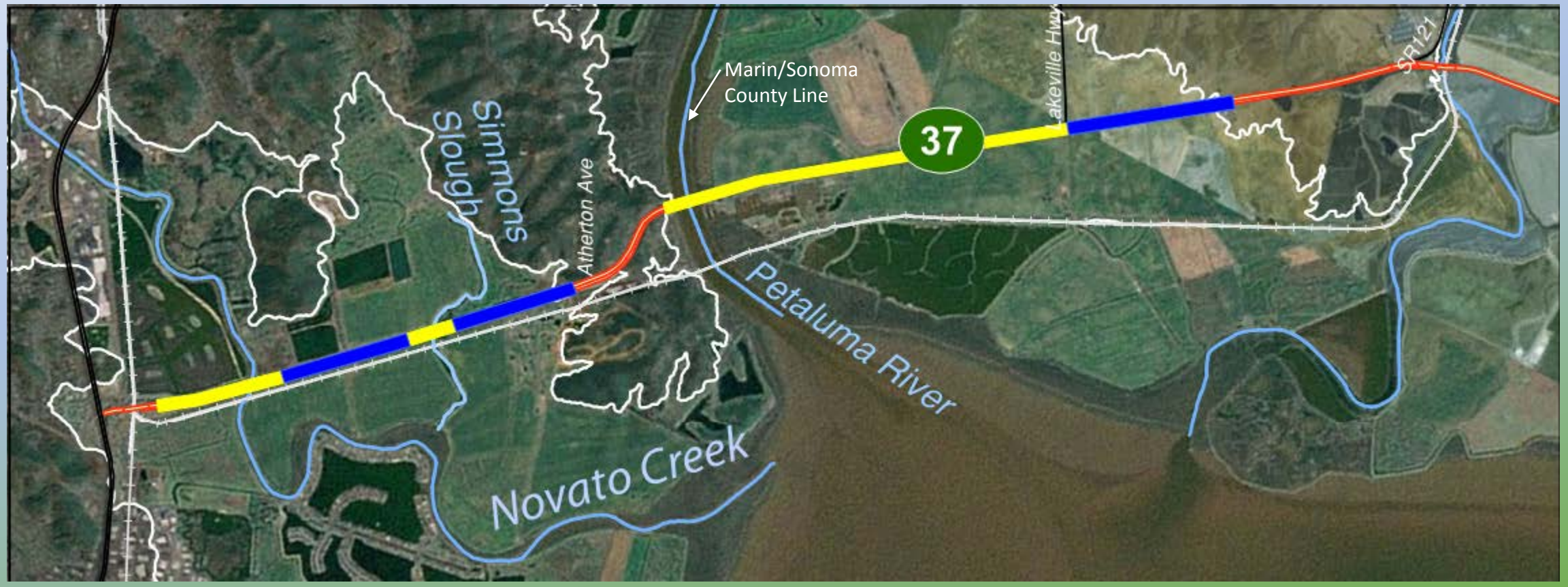
# Typical Section – Piled Causeway



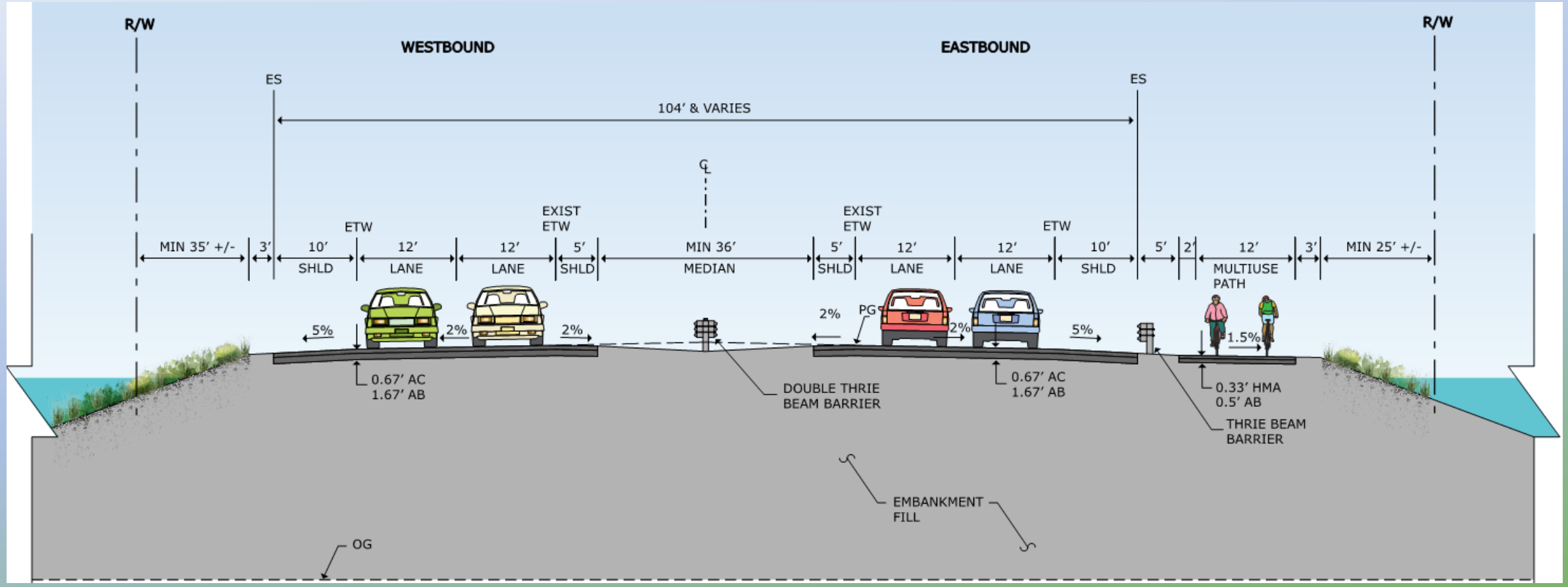
# Alternative 1 – Piled Causeway

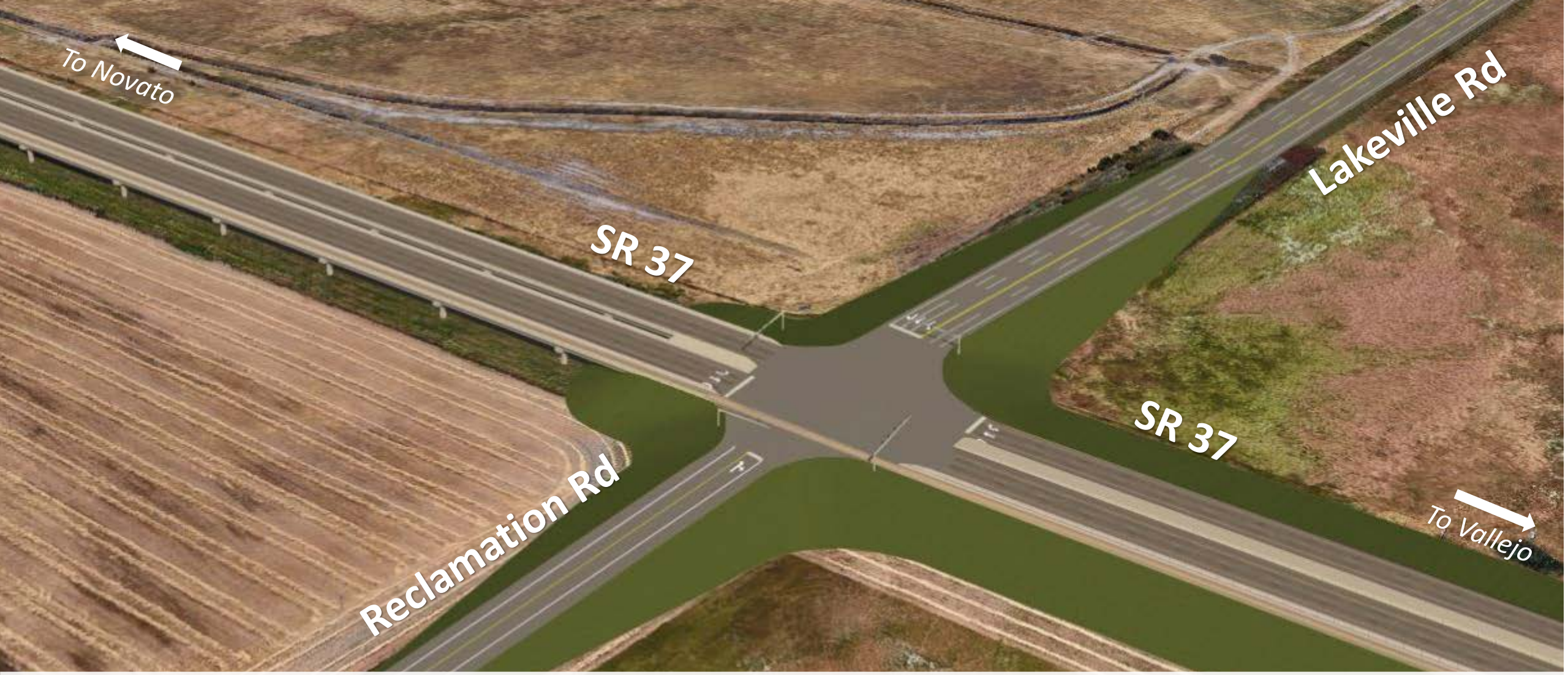
# Alternative 2 - Hybrid (Piled Causeway/Embankment)

- 3.2 miles of Piled Causeway/Bridge
- 2.6 miles of Embankment



# Alternative 2 - Typical Embankment Section





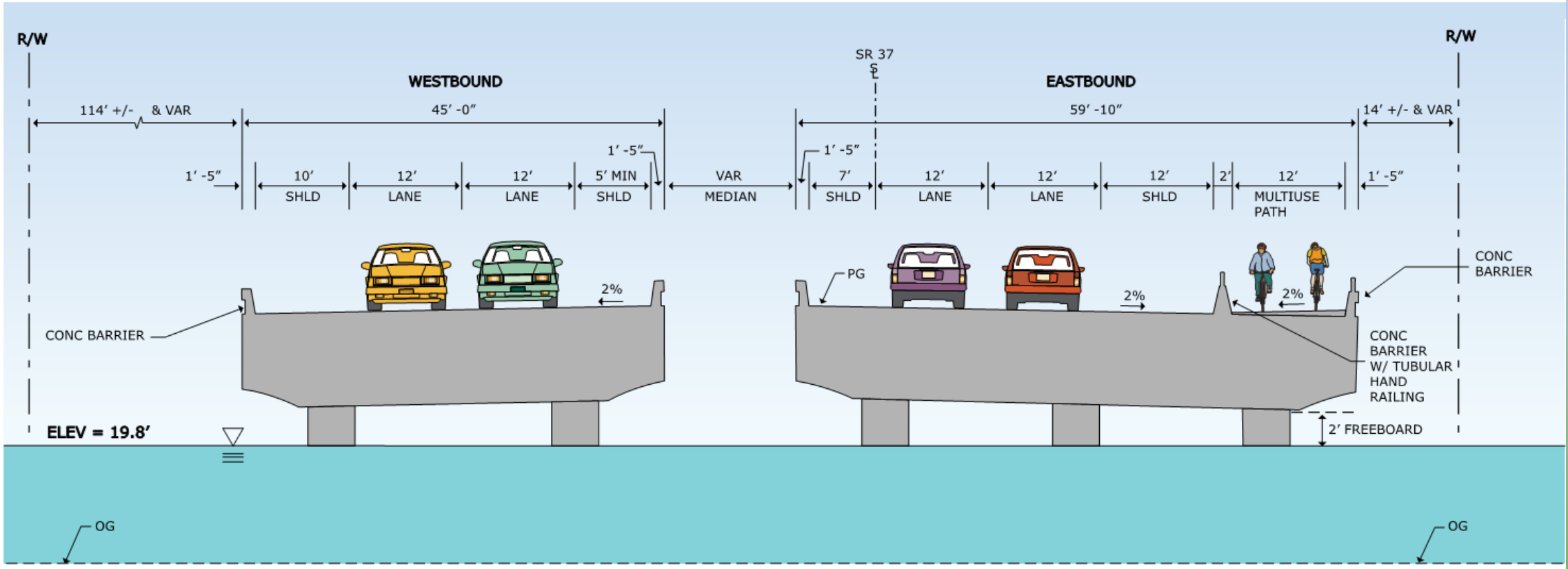

# Alternative 2 - Hybrid (Piled Causeway/Embankment) at Lakeville Rd

# Alt1&2 - Petaluma River Bridge Replacement

# Alternative 3 – US 101 to Novato Creek

- 1.0 mile of Structure

# Typical Section – Piled Causeway



# Conclusion

- Segment A is vulnerable to flooding under existing conditions

- Two locations of particular concern for overtopping
  - Port Sonoma
  - Novato Creek
- Majority of the levees are in poor conditions

- A long term solution is needed now for specific project identification and environmental clearance.

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# Thank You

Questions?