

SR 37—Segment A

from US 101 to Sears Point

Sea Level Rise
Corridor Improvement Study



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

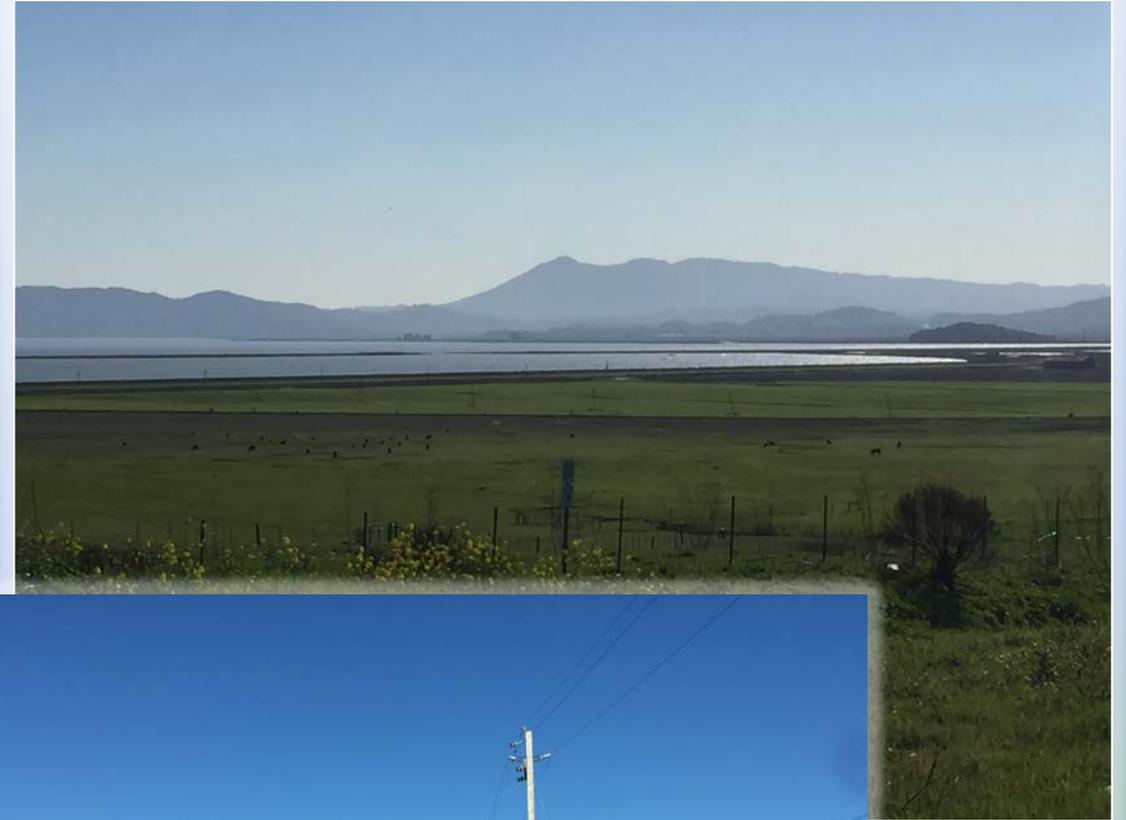
Study Assumptions

- 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



Lakeville
Highway

SR 121

SR 37

Sonoma
Creek

Petaluma
River

San Pablo Bay

US Coast Survey, 1856

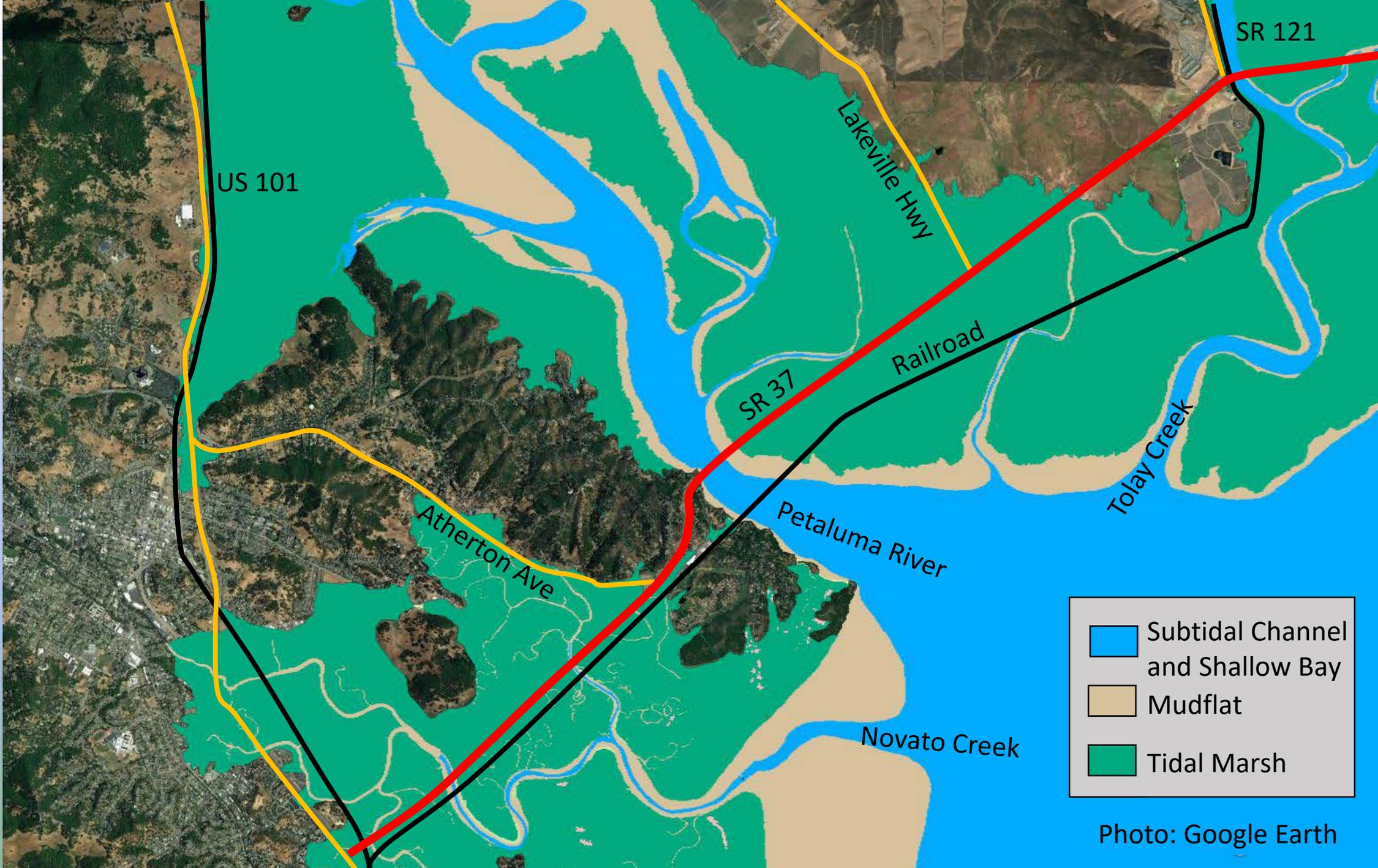
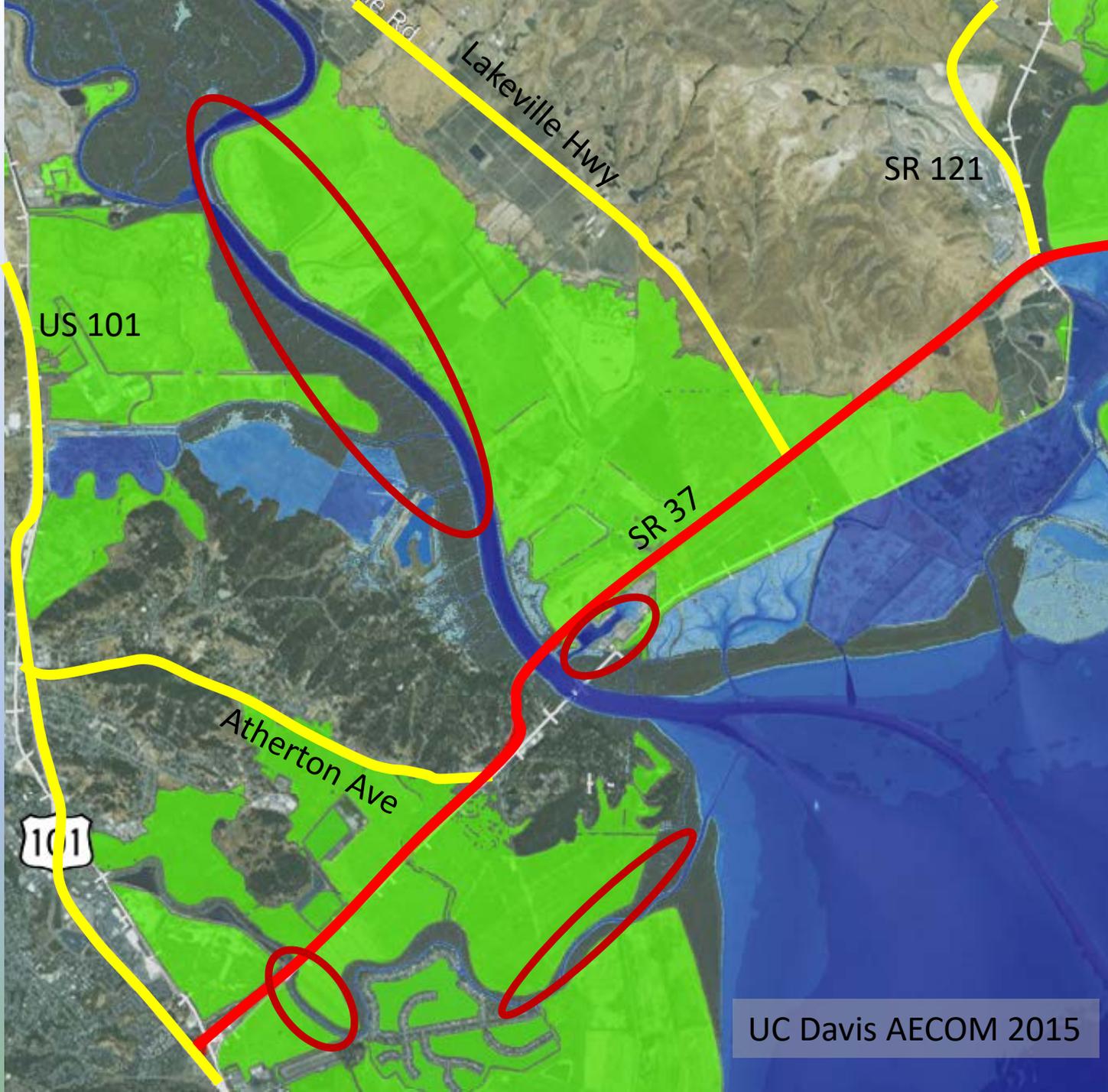


Photo: Google Earth



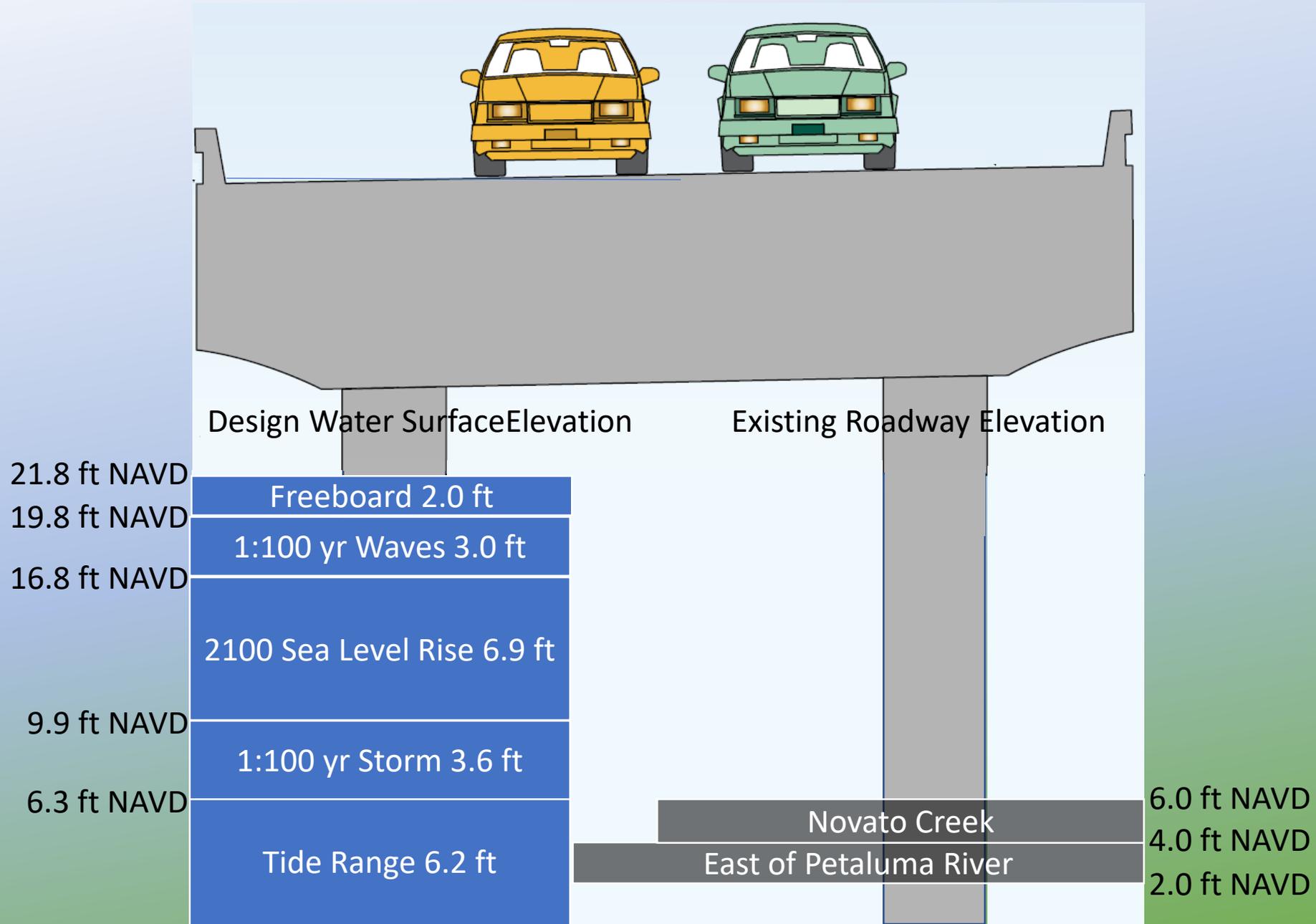
Low areas vulnerable to flooding.



Levees vulnerable to overtopping or failure.



Water Surface Elevations



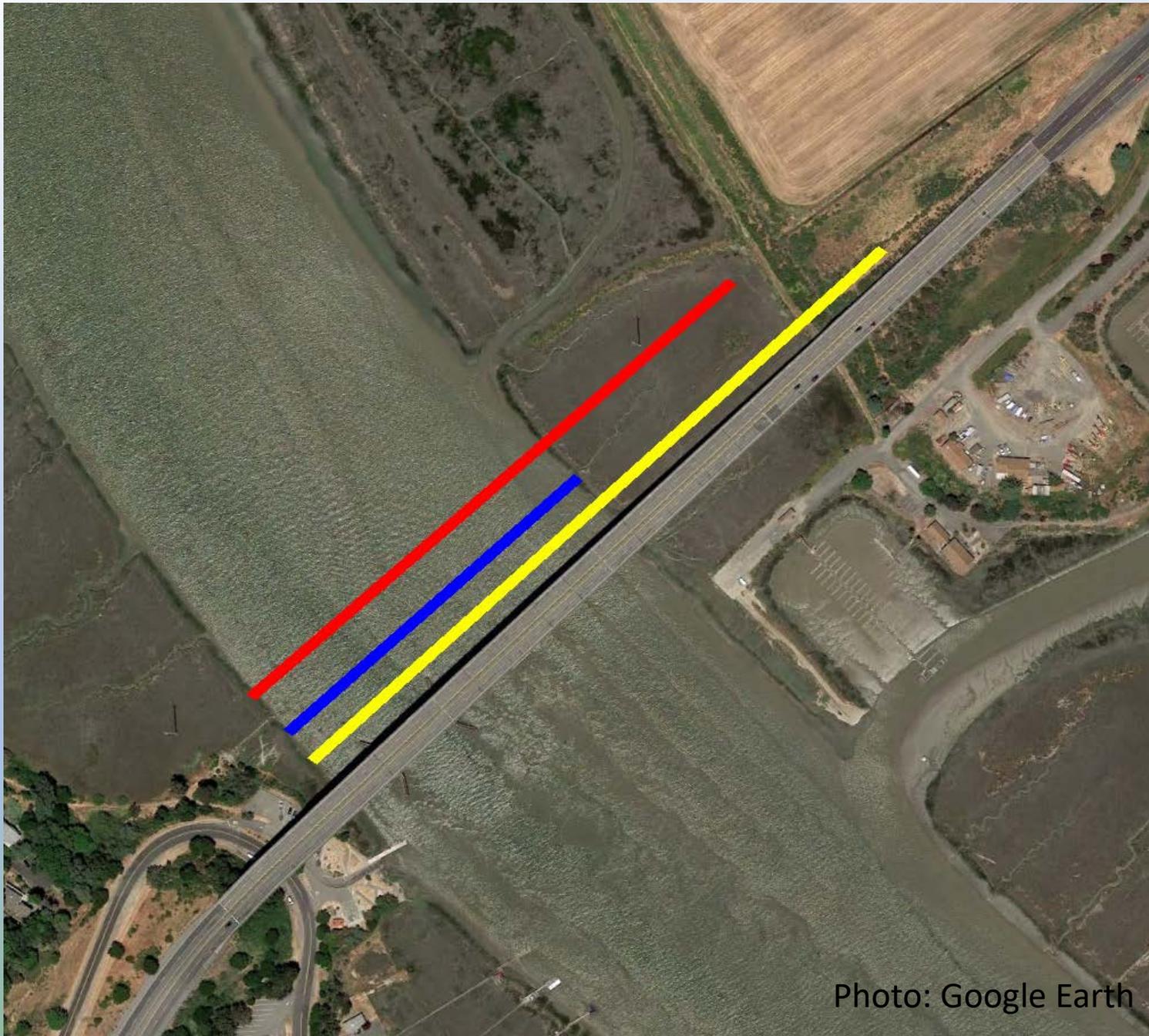


Photo: Google Earth

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

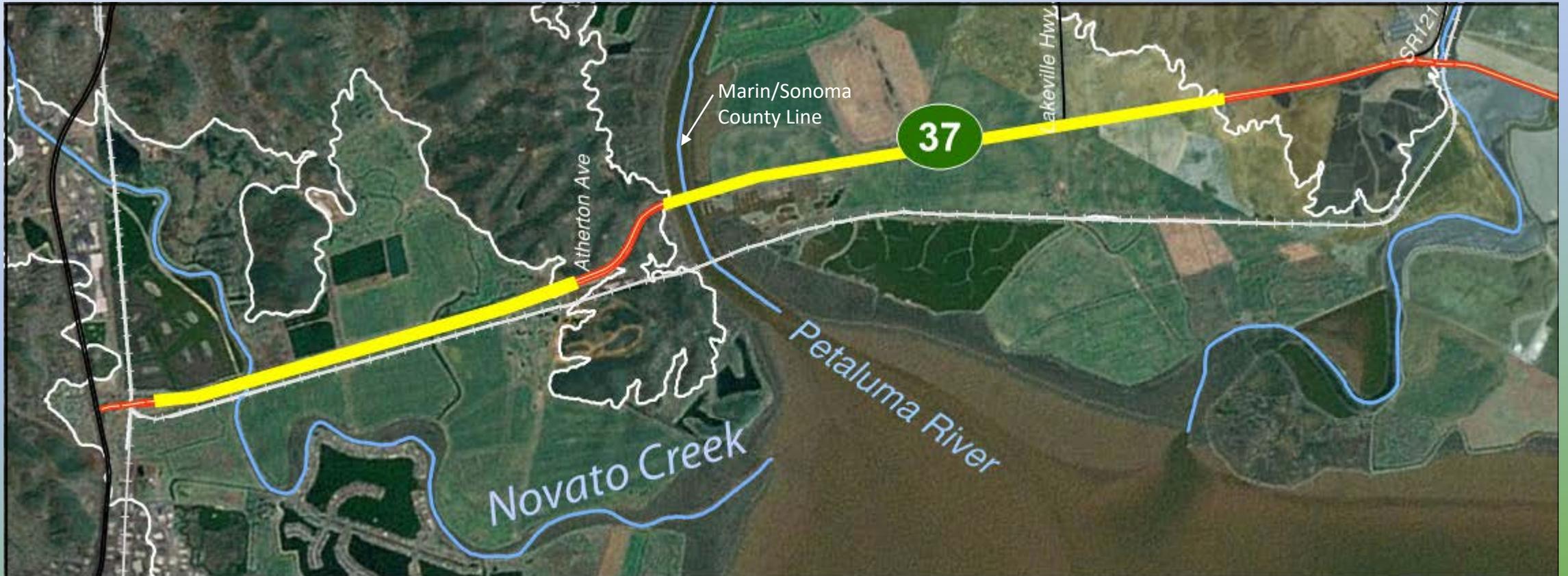
- Combination of embankment and structure

Alt 3: Novato Creek

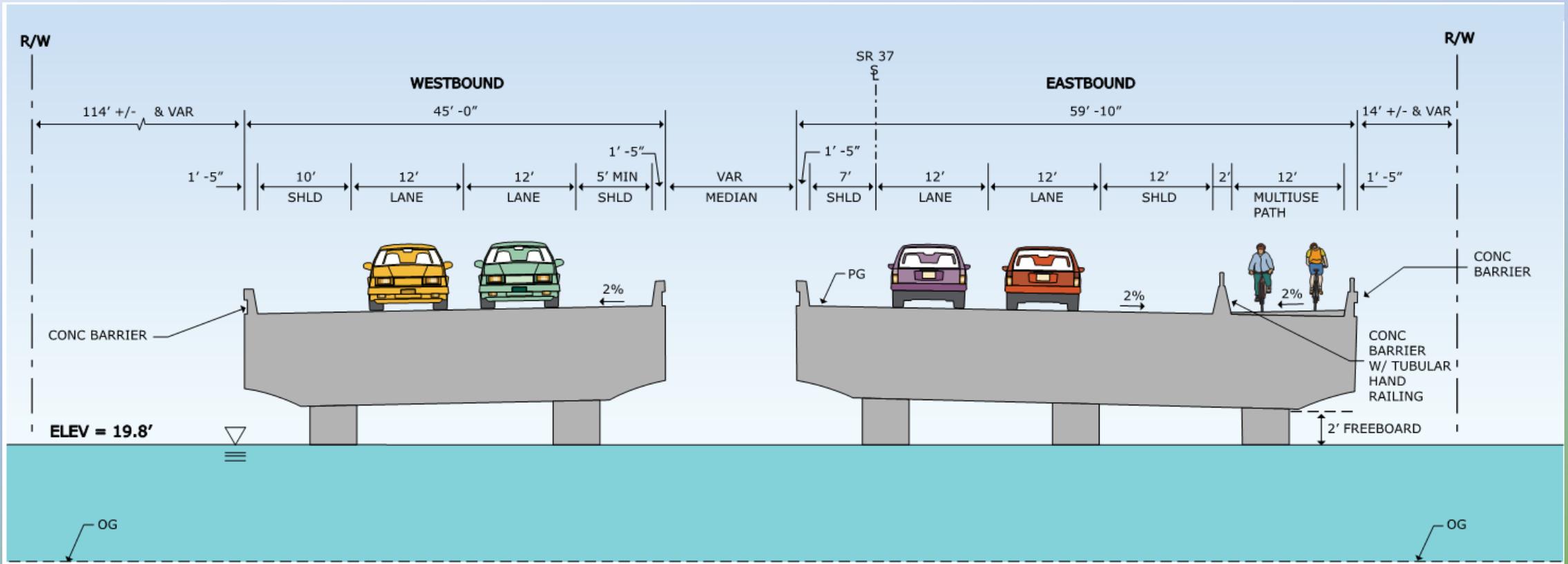
- Elevate portion of SR 37 from US 101 to past Novato Creek only

Alternative 1 – Piled Causeway

- 5.8 miles of Piled Causeway/Bridge 



Typical Section – Piled Causeway

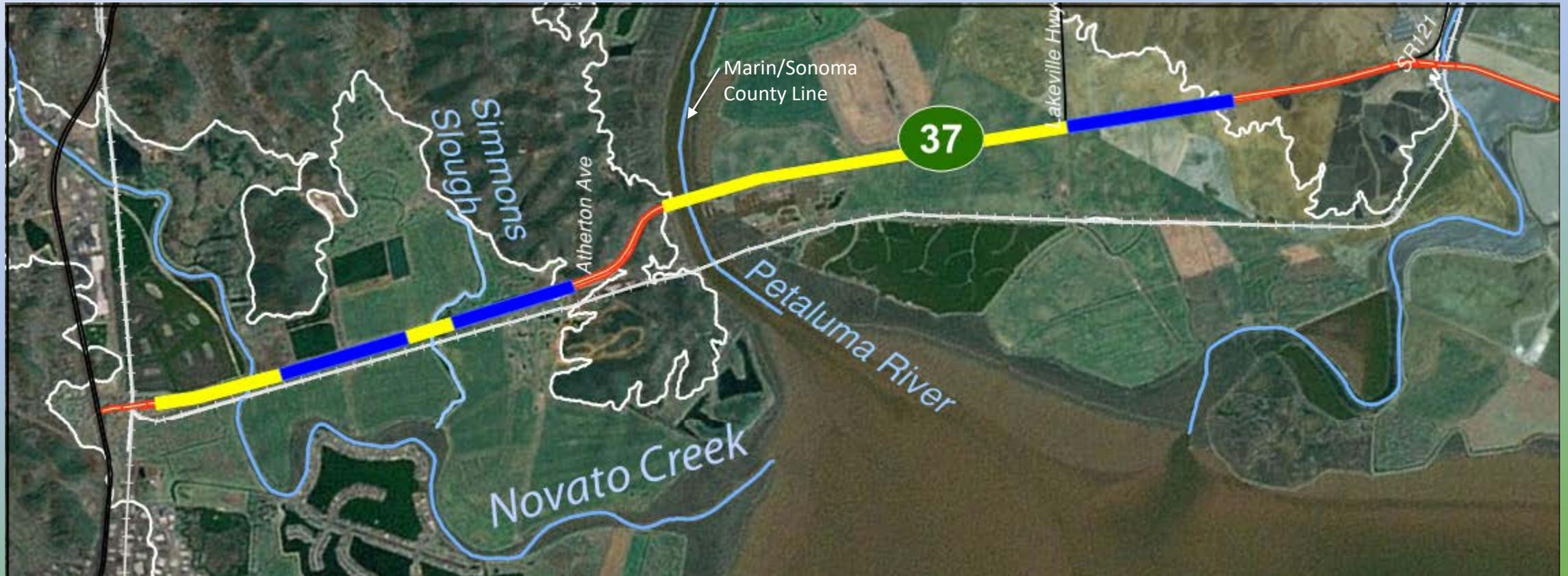




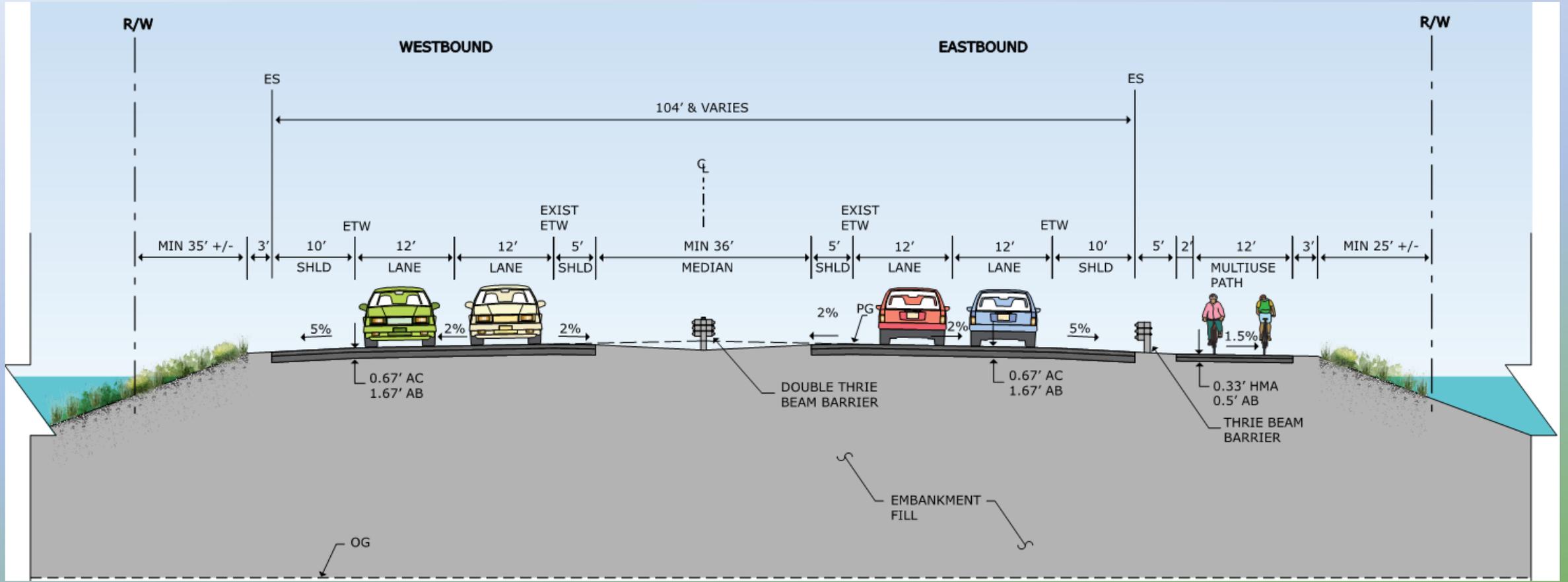
Alternative 1 – Piled Causeway

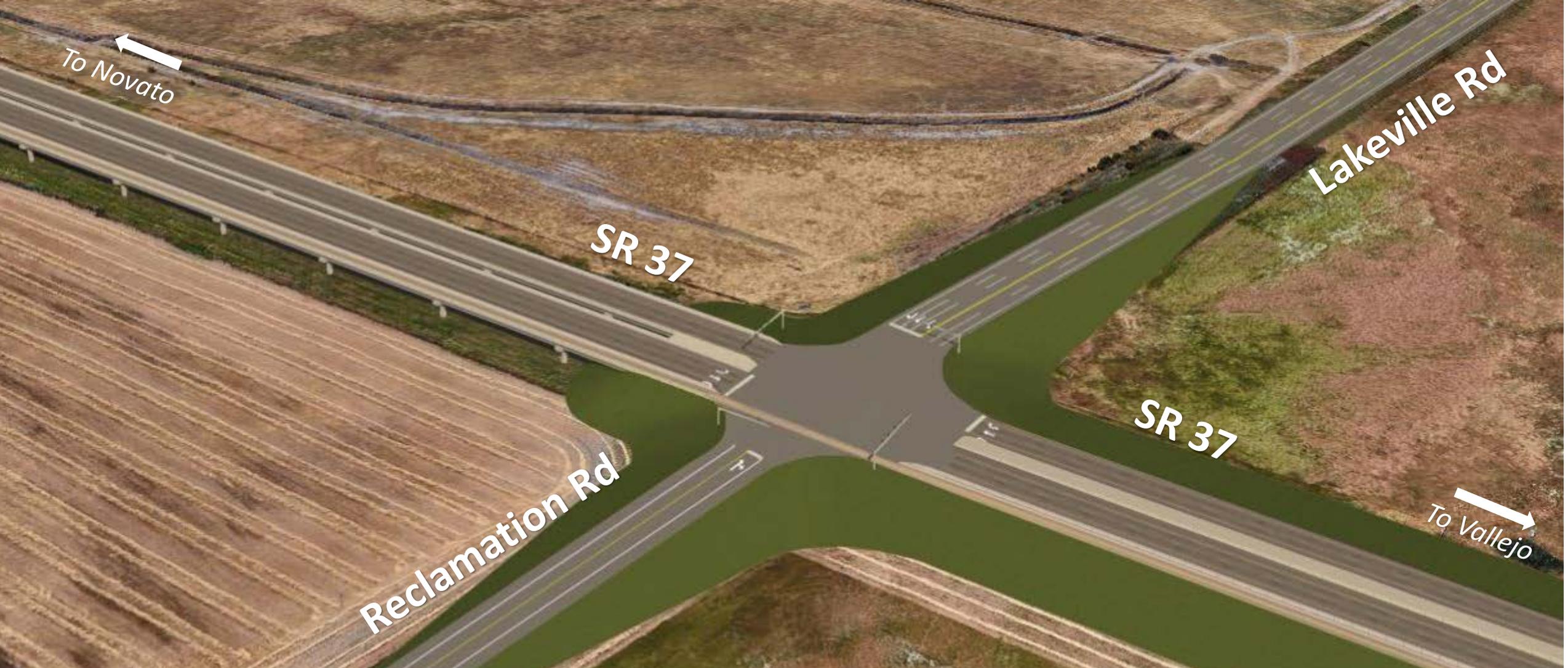
Alternative 2 - Hybrid (Piled Causeway/Embankment)

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



Alternative 2 - Typical Embankment Section





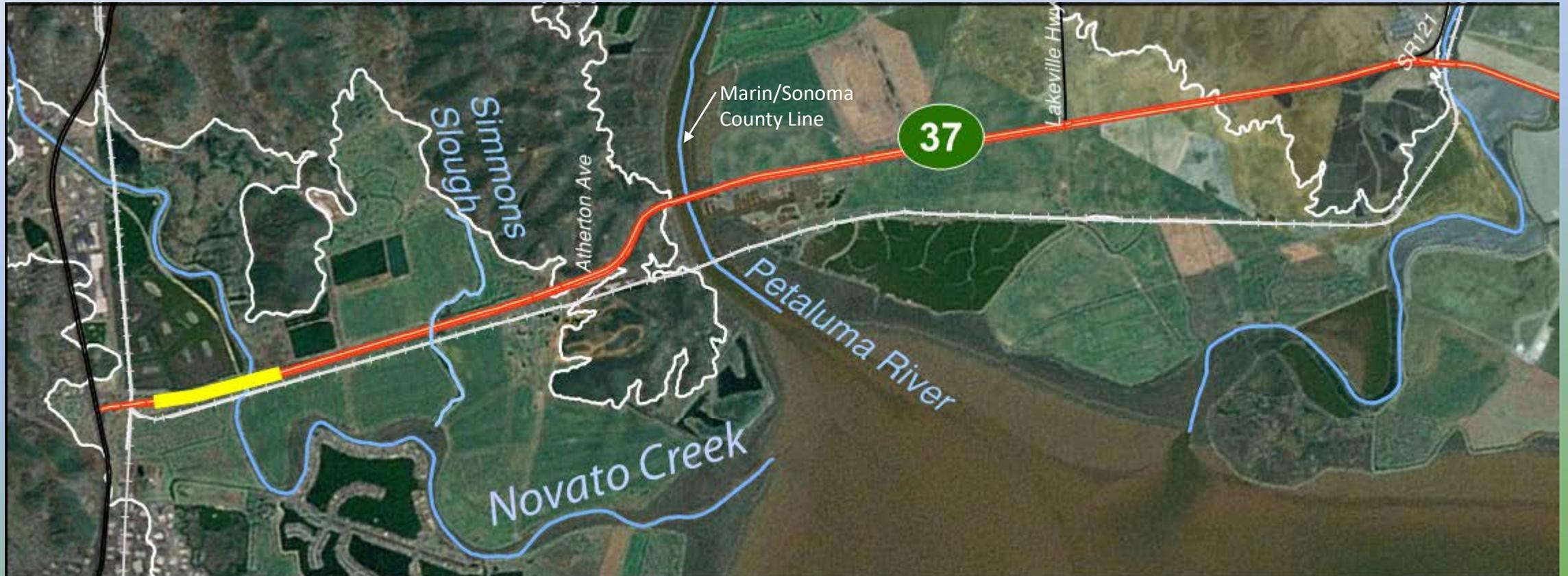
Alternative 2 - Hybrid (Piled Causeway/Embankment)
at Lakeville Rd



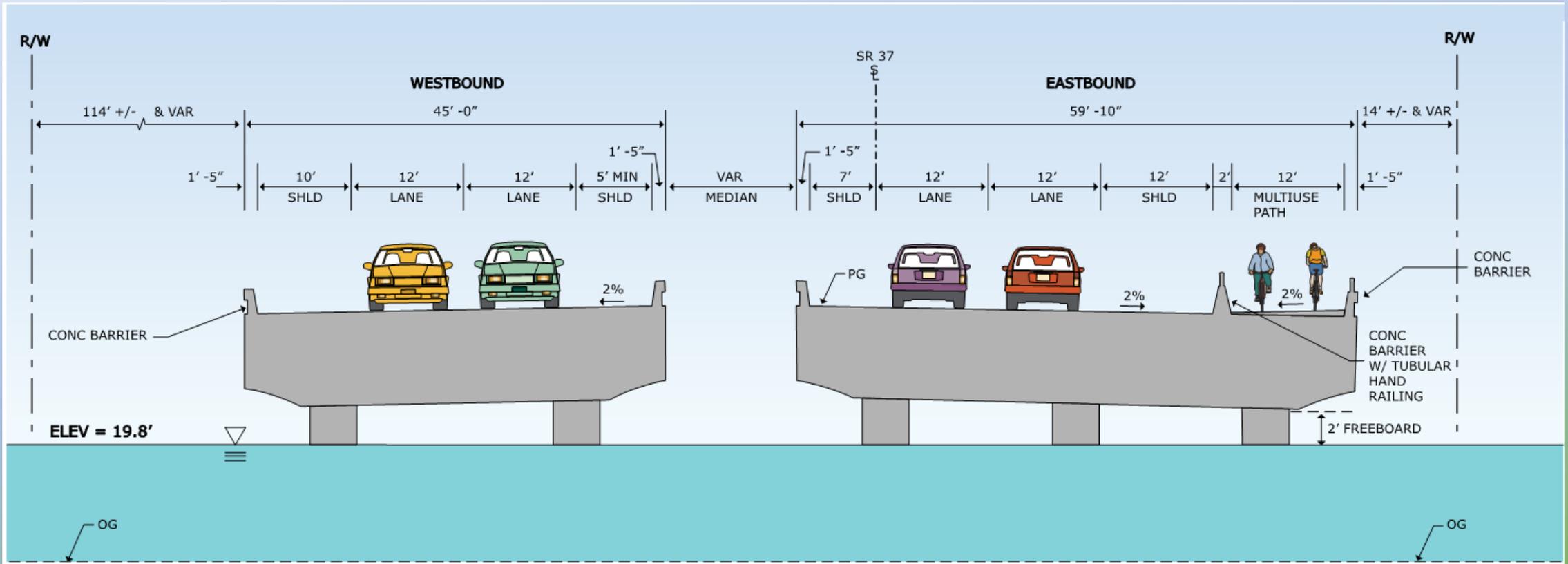
Alt1&2 - Petaluma River Bridge Replacement

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.



Thank You

Questions?

