State Route 37 Transportation and Sea Level Rise Corridor Improvement Plan

SONOMA COUNTY TRANSPORTATION AUTHORITY: March 12, 2018

With Support From:

Kimley-Horn   AECOM
The SR 37 Corridor
Goals and Objectives

Integrate transportation, ecosystem and sea level rise adaptation into one design

Improve mobility across all modes and maintain public access

Increase corridor for resiliency to storm surges and sea level rise
100 Minutes to Travel Back Home Every Day

- **6 Hours** of Congestion During Weekday AM Commute (Westbound)
- **7 Hours** of Congestion During Weekday PM Commute (Eastbound)
- **Weekend** Congestion Throughout Most of the Day
- **No Transit** Services

Parts of SR 37 Already Flood During Heavy Storms

- Weak Links Are Most Vulnerable to Short Term Flooding and Eventual SLR

Recent Floods in Spring, 2017

Majority of SR 37 Will Be Inundated by 2050 Conditions with Sea Level Rise & Storm Surges

- **Year 2100 Sea Level Rise Scenario**
- **Permanent Inundation Expected by 2050:** Segment A and Segment B from SR 121 to Sonoma Creek
- **SR 37 Closure would Divert Traffic to Other Already Congested Routes:** I-80, US 101, I-580, SR 12, SR 121, etc.
- **State and Federal-Protected Species Lose Habitat**

Source: UC Davis, AECOM, 2015.
Many of the Adjacent Levees Protecting SR 37 Are Privately Owned

- Private Levees Not Constructed Specifically for Protecting SR 37
  - Ancillary Benefit for SR 37
  - Challenges with Maintaining and Upgrading Private Levees
- A Number of Low Elevation Hotspots Along Corridor

SR 37 Rich with Wetlands, Baylands, and State and Federally-Protected Species

- Wetlands and Baylands
- State and Federally-Protected Species:
  - Salt Marsh Harvest Mouse
  - CA Ridgway’s Rail
  - CA Black Rail
  - San Pablo Song Sparrow
  - Red Legged Frog
  - Green Sturgeon
  - Longfin Smelt
  - Steelhead
  - Chinook Salmon

The SR 37 Bicycle / Pedestrian Access

LEGEND
- Segment A: Expressway
- Segment B: Conventional Highway
- Segment C: Freeway
- Existing Bicycle Access
- Planned Bicycle Access

Multimodal Access Points:
1. Deer Island Open Space Preserve
2. Black Point Boat Launch
3. Port Sonoma Marina
4. Sonoma Baylands Bay Trailhead
5. Reclamation Rd Sears Point Bay Trailhead
6. USFWS Headquarters – Sears Point Bay Trailhead
   Ralph Benson Baylands Center
7. Paradise Vineyards – Potential Bay Trailhead
8. CDFW Tubbs’ Tolay Bay Trailhead
9. Caltrans Public Viewing
10. Skaggs Island Access
11. Cullinan Ranch Public Access
12. Caltrans Public Viewing
13. Wilson Ave Bay Trailhead
14. White Slough Trailhead South
15. White Slough Trailhead North
A High-Level Assessment of SR 37 Corridor Improvement Needs:

• A Raised/Elevated Roadway
• Ecological Enhancement
  • Hydrological and Wildlife Connectivity
  • Living Levees that Provides Habitat Opportunities

• Improve Capacity in Segment B
  • New Managed Lane(s)

• Multimodal and Local Access Improvements
  • Improve Bay Trail/Bike Access, Provide Transit Service
  • Intersection and Interchange Improvements at SR 121, Mare Island, and Lakeville Highway
Environmental Resilience and Transportation Strategies for SR 37

Retreat
Adaptive Capacity on alternative roadways
Rail Alternative
Ferry Alternative
[No feasible retreat strategies. Rail and ferry options alone would not accommodate travel demand for SR 37]

Protect
Maintain Existing Roadway
- Operational Improvements
Flood Protection
- Levee Improvements
- Building Seawall
- Marshland Restoration
- Nature-Based Solutions

Accommodate
Raised Roadway (Segment A and B)
- Berm
- Causeway
- Hybrid
Increase Segment B Capacity
Integrated Transportation and Ecosystem Design
Advanced Mitigation Planning
Near-Term, Low-Cost, High-Impact Operational Improvements
And Flood Protection Improvements

- Total Project Costs (Entire Corridor): $40M – $50M
- Project Delivery: 1 – 7 Years

Note:

Legend:
- 4-LANE EXPRESSWAY - Segment A
- 2-LANE EXPRESSWAY - Segment B
- FREEWAY - Segment C
- BOTTLENECK

Diagram:

- Segment A: Flood Protection
- Segment B:
  - Improve Lane-Drop Merge at SR 121 Intersection:
    - Continuous Flow
    - Signal Optimization
    - Roundabout
  - Address On-Going Settlement Issues at Railroad Crossing
  - Metering at Mare Island Westbound On-Ramp
  - Improve Merge and Lane Drop at Mare Island Westbound On-Ramp
  - Flood Protection at Mare Island Eastbound Off-Ramp

Corridor-Level:
- Park & Ride Lots
- ITS Implementation
- Express Bus Transit Service

2-Lane Rural Highway

- Typical Capacity: 1,700 Vehicles Per Hour
- Lost Operational Efficiency: 300
- Existing Seg. B Capacity: 1,300

Note:
• Total Project Cost (Entire Corridor): $1,500M – $4,500M
• Project Delivery: Between 10 – 20+ Years
Segment B is the Priority Segment

Note: Risk ratings were assigned as follows: 1.0 - 1.4 (low), 1.5 - 2.4 (moderate), and a 2.5 - 3.0 (high)

<table>
<thead>
<tr>
<th>Segment Risk Rating</th>
<th>Segment A</th>
<th>Segment B</th>
<th>Segment C</th>
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</thead>
<tbody>
<tr>
<td>Effect on Existing Traffic Congestion</td>
<td>1</td>
<td>3</td>
<td>1</td>
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<tr>
<td>Effects on Environmental Resources</td>
<td>2</td>
<td>3</td>
<td>1</td>
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<tr>
<td>Impacts Due to Sea Level Rise</td>
<td>3</td>
<td>3</td>
<td>1</td>
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<tr>
<td>Economic Impact on Commuters</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Economic Impact on Goods Movement</td>
<td>2</td>
<td>3</td>
<td>3</td>
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<tr>
<td>Impacts to Recreational Activities</td>
<td>2</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Length of Segment Impacted/Capital Improvement Cost</td>
<td>3</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>

| Composite Risk Rating                                    | 2         | 3         | 2         |
Priority Segment B Design Considerations: Hybrid

Hybrid project design

The causeway would create wetland restoration opportunities, by reconnecting the hydrologic and ecological landscape, and reconfigure tidal exchange.

The levee/embankment would provides an option as a living levee, improve access to public viewing areas.

* Box culvert is also an option.

Note that this is an illustrative restoration scenario, not a proposed plan.
Vision and Guiding Principles of Baylands Group added to Corridor Plan: 
**Integrate, Don’t Mitigate:** Integrate *infrastructure improvements* for SR 37 with existing and future *habitat* planning, conservation and restoration to ensure *healthy ecosystem function* and *resilience* to landscape scale change of the San Pablo Bay.
Implementation Timeline

2017-2020
- SLR
- Protect
- Protect/ Accommodate
- Accommodate

2030
- SR 37 Corridor wide: Operational Improvements, Flood Protection, ITS Infrastructure
- Protect Segment A & C, Elevate and Widen Segment B, Bay Trail, Marshland Restoration, Transit/Ferry Service Options
- Capacity Enhancement, SLR Resiliency, HOV/Express Lane (Segment B), Multi-modal Facilities (Segment B), Ferry Service Vallejo to Larkspur, Improve levees for Flood Protection (Segment A and C), Marshland Restoration/Mitigation/Access
- Elevate Segment A, Improve Bicycle Connections, Bay Trail Development, ITS Infrastructure
- SLR Resiliency (Segment A and entire SR 37 corridor), HOV/Managed Lane Options, Multi-Modal Accommodations, ITS Infrastructure (entire SR 37), Improve Marshland access and restoration

2050

Decision point
- Planning/Design/Approvals
- Construction
- Maintenance/In-service/Useful Life
- Consider Alternative Expedited Project Delivery Options
Next Steps

• Develop Preliminary Design for Segment B:
  ▪ 3-Lane and 4-Lane Options
  ▪ Hybrid Roadbed Design Option: Causeway/Box Culvert/Levee
  ▪ Interchange Improvements at Mare Island and SR 121
  ▪ Bay Trail/Bike Facility options
  ▪ Refine Cost Estimates

• Near-Term Operational Improvements at SR 121 and at Mare Island

• Continue Environmental Stakeholder Outreach

• Evaluate Transit Options for the Corridor

• Transition Design Alternative Assessment (Project Initiation Document (PID) Equivalent) to a formalized Caltrans Project Initiation Document by the end of 2018.
Public Outreach

Input received from:

- Four Open Houses on Draft Corridor Plan: Sept. – Oct 2017
- Online Place based survey with approximately 3700 responses: Dec. – Jan. 2018
- Six Focus Groups: Jan. – Feb 2018
- Environmental Stake Holder Working Group Meetings.
- Policy Committee Meetings since November 2015

Highway 37 Improvement Plan

Join us for an Informational Open House
Come to the one nearest you!

In response to impacts from sea-level rise, flooding and increased traffic along the corridor, the counties of Marin, Napa, Sonoma and Solano, in partnership with Caltrans and the MTC, are planning to improve access and safety along Highway 37.

The Open Houses will aim to:
- Inform residents and Highway 37 users about the status of the planning process
- Provide an opportunity for participants to share their concerns and provide feedback

- **NOVATO - Wednesday, Sept. 20th**
  6 pm to 8 pm at The Key Room
  1385 Hamilton Parkway, Novato

- **AMERICAN CANYON - Wednesday, Sept. 27th**
  6 pm to 8 pm at the American Canyon Council Chambers
  4381 Broadway Street, American Canyon

- **SONOMA - Thursday, Sept. 28th**
  6 pm to 8 pm at Sonoma Veterans Memorial Building
  126 First Street West, Sonoma

- **VALLEJO - Monday, Oct. 2nd**
  6 pm to 8 pm at the Vallejo Naval and Historical Museum
  754 Marin Street, Vallejo
• Incorporated draft vision statement and guiding principles from the Baylands Group

• Added a bike and pedestrian access map and noted that implementation of improvements will incorporate multimodal access along the corridor

• Updated summary tables for near-term and mid- to long-term improvements in terms of estimated timeframe, after further considerations of funding, environmental and approval processes

• Appendices of Open House Summary, Comments and Responses
Staff recommends that the Board approve the SR 37 Transportation and Sea level Rise Corridor Improvement Plan and direct staff to expedite implementation of plan concepts.

Staff also requests authorization to address minor technical revisions and corrections to the document as needed in order to ensure the document that is available on line reflects what has been approved by all four counties.