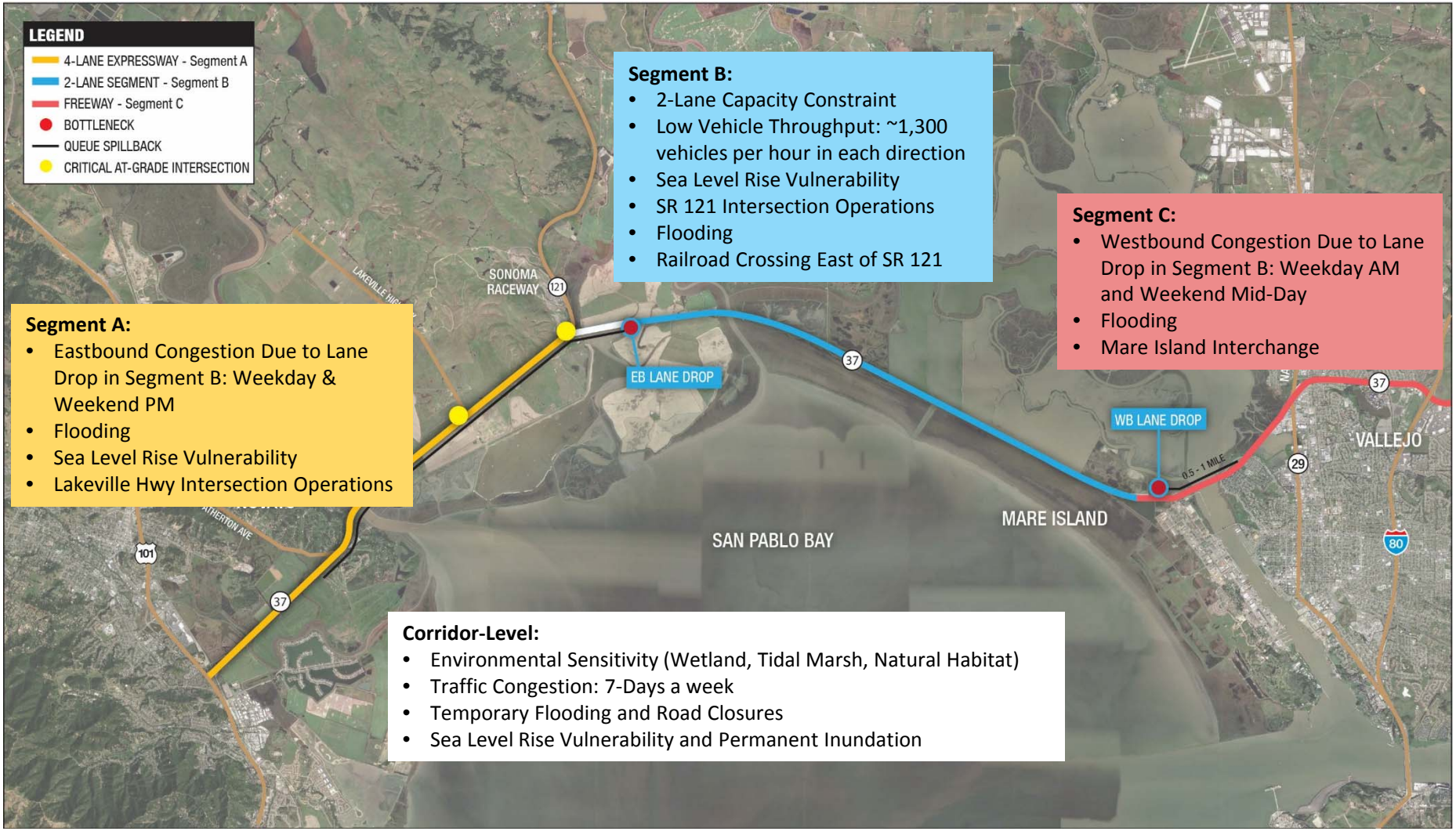
State Route 37 Design Alternative Assessment

Policy Committee Meeting: March 2, 2017

SR 37 Corridor Issues and Constraints



Segment A:
- Eastbound Congestion Due to Lane Drop in Segment B: Weekday & Weekend PM
- Flooding
- Sea Level Rise Vulnerability
- Lakeville Hwy Intersection Operations

Segment B:
- 2-Lane Capacity Constraint
- Low Vehicle Throughput: ~1,300 vehicles per hour in each direction
- Sea Level Rise Vulnerability
- SR 121 Intersection Operations
- Flooding
- Railroad Crossing East of SR 121

Segment C:
- Westbound Congestion Due to Lane Drop in Segment B: Weekday AM and Weekend Mid-Day
- Flooding
- Mare Island Interchange

Corridor-Level:
- Environmental Sensitivity (Wetland, Tidal Marsh, Natural Habitat)
- Traffic Congestion: 7-Days a week
- Temporary Flooding and Road Closures
- Sea Level Rise Vulnerability and Permanent Inundation

Project Approach

- California Coastal Commission Sea Level Rise Policy Guidance (2015) - Project Shall:
  - Be designed to accommodate worst case SLR scenario
  - Minimize risks to other coastal resources
  - Allow for future adaptation

- Use Best Available SLR Science in the Analysis
  - Verify UC Davis/AECOM – SR 37 Integrated Traffic, Infrastructure and SLR Analysis (2016)

- Understand Timing of Sea Level Rise Impacts
  - Use SLR inundation maps to identify timing of impacts to highway and levees
  - Inform short and long-term adaptation strategy development
  - Consider permanent inundation versus temporary flooding

- Traffic Forecast and Operational Analysis
  - Near Term (2022)
  - Long Term (2040)

Flooding and SLR Solutions

Near-term to Long-term Solutions

Drainage Improvements

SR 37 at Novato Creek

SR 37 at Tolay Lagoon

Shoreline Improvements

Port Sonoma at Petaluma River

Levee Improvements

Petaluma River
Novato Creek
Tolay Creek
Sonoma Creek

Raise Roadway

Short-term:
Mare Island

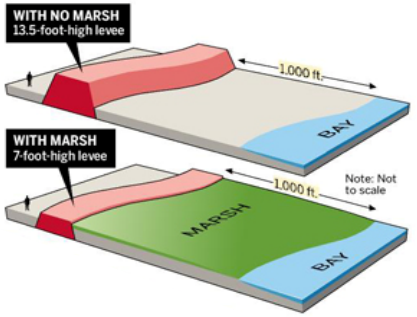
Long-term:
Corridor-wide + Restoration

Natural Adaptation Solutions

Scale of Action

Small-scale Wetland Restoration
- Mitigate impacts of roadway widening
- Moderate wave attenuation
- Minor habitat improvements

Living Levee (mild, natural slope)
- Allows for habitat transition
- Reduces wave runup
- Lessen or eliminate need for armoring



Elevate Roadway on Causeway
- Increase hydrological connectivity
- Restore large contiguous parcels
- Help meet bay-wide environmental goals
- Moderate wave attenuation

Phase 1 – Corridor Plan

1. Data Collection and Assessment
   A. Supplemental Ground Survey to Confirm Critical Elevation
   B. Supplemental Traffic Data Collection
   C. ROW
   D. Levee Ownership

2. Corridor Plan
   A. High Level Framework
      i. Capacity Constraints
      ii. Sea Level Rise Vulnerability
      iii. Flooding Concerns
   B. A “No-Build” Assessment
   C. Phased Improvements
   D. Identify Priority Segment

   Optional Task: Shoreline Protection Strategies for Up to 3 Locations

Phase 2 – Alternative Development for Priority Segment

1. **Identification of Potential Improvement Strategies**
   A. 3-Lane Segment B w/Median Contra-Flow Lane/Express Lanes (Fixed/Movable Barriers)
   B. 4-Lane Segment B
   C. Toll Road Consideration
   D. Improve Travel Modes:
      i. Express Buses/Commuter Parking
      ii. Bus on Shoulder
      iii. Bicycle Facilities
   E. Interchange/Intersection Reconfiguration
      i. SR 37 & Mare Island
      ii. SR 37 at SR121, SR 37 at Lakeville Hwy
   F. Operational: ITS, Merge Improvements
   G. Sea Level Rise Adaptation

2. **Detailed Analysis**
   A. Traffic Operations
   B. Design
   C. Cost Estimates
   D. Environmental Screening

SR 37 DAA Schedule

Phase 1

1. Data Collection & Assessment	April/May 2017
2. SR 37 Corridor Plan	June/July 2017

Phase 2

3. Alternative Development for Priority Segment	Oct/Nov 2017
4. DAA Documentation	Dec 2017/Jan 2018

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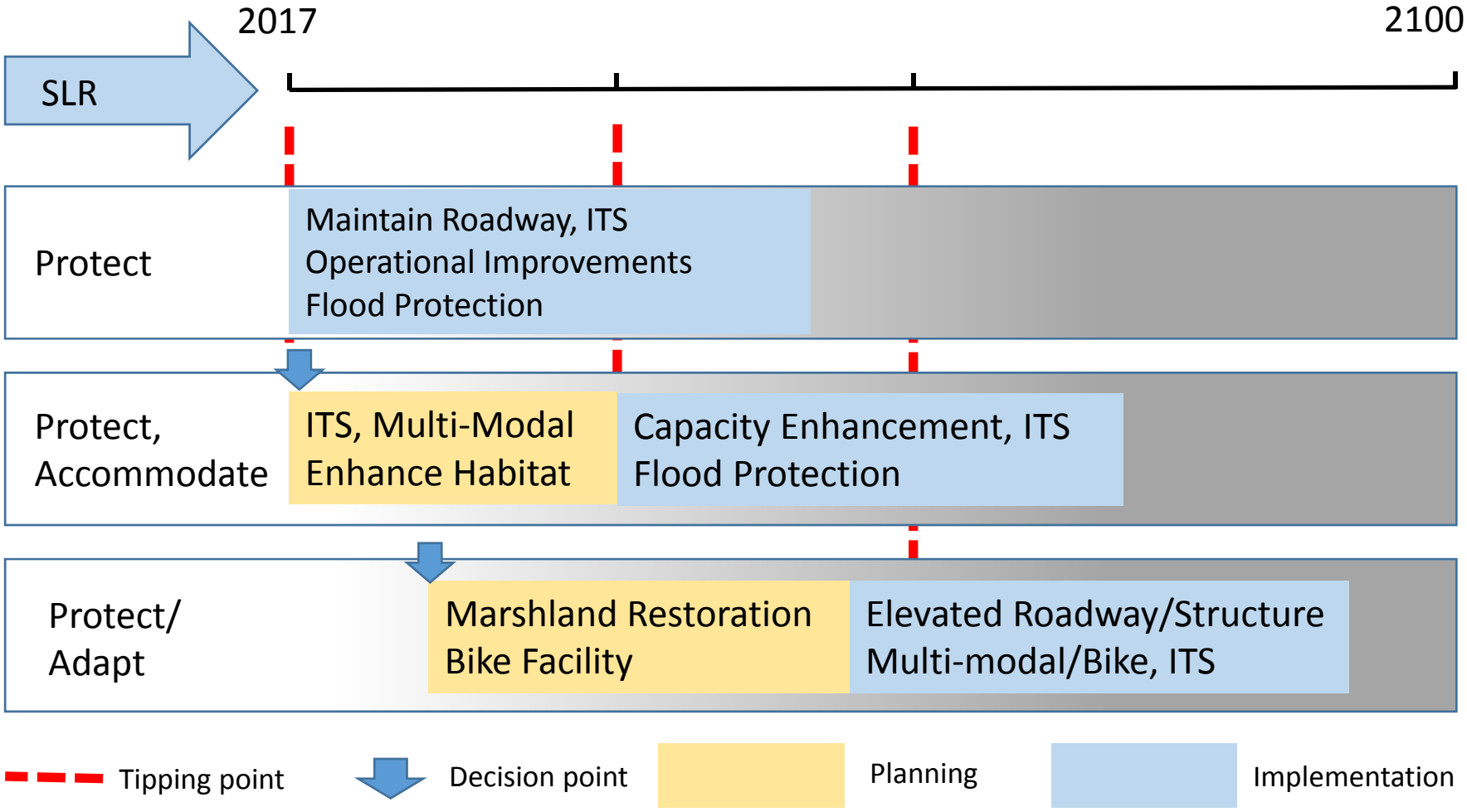
Implementation Timeline Consideration