



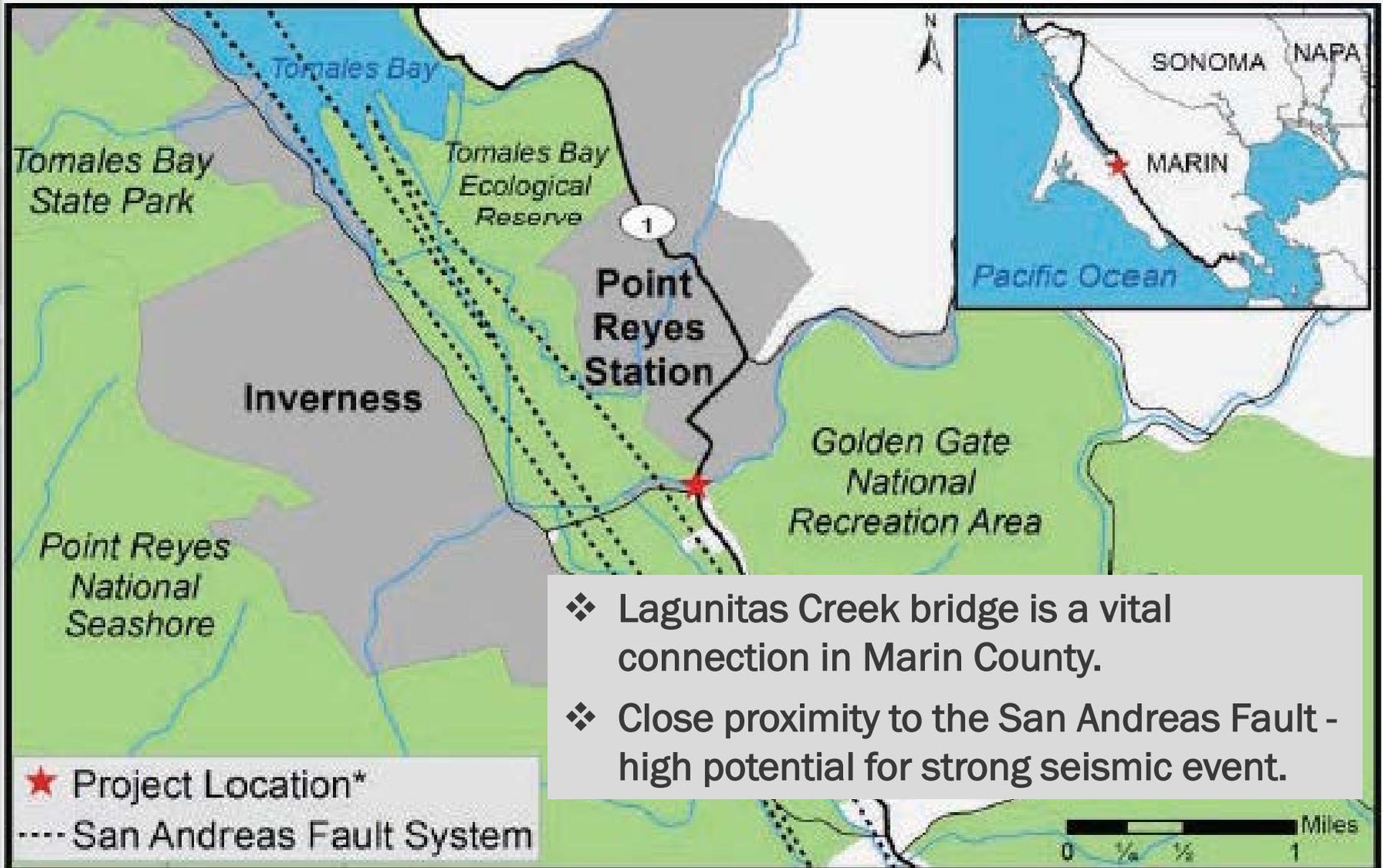
**LAGUNITAS CREEK BRIDGE PROJECT
INFORMATIONAL MEETING
OCTOBER 14, 2015**

INFORMATIONAL MEETING AGENDA

- Presentation
 - Project introduction
 - Issues raised during project scoping
 - Project and construction method alternatives
- Public comment and Caltrans response
- As time allows, return to reviewing information at stations around the room

Please provide your input on the provided comment cards and hand them to the Welcome Desk!

PROJECT LOCATION



- ❖ Lagunitas Creek bridge is a vital connection in Marin County.
- ❖ Close proximity to the San Andreas Fault - high potential for strong seismic event.

★ Project Location*

---- San Andreas Fault System

EXISTING CONDITION - BRIDGE



- 152 ft long, 3-span structure

- *Two 26 ft. reinforced concrete approach spans*
- *100 ft. long riveted steel pony truss center span*

- 11' lanes, no shoulders, 4' sidewalk on the west side



EXISTING CONDITIONS



- High traffic volume
- Limited right-of-way
- Environmentally sensitive location (narrow work windows)

North

PROJECT PURPOSE

...is to provide a safe, seismically-stable crossing over Lagunitas Creek on Route 1

PROJECT NEED: THE BRIDGE

- Is a vital connection to the Pt. Reyes community and beyond and this connection must be maintained
- Does not meet current safety and seismic standards
- Is showing signs of incremental wear and deterioration

PROJECT NEED

The bridge is 86 years old & wearing out

- Rusting of steel – loss of section
- Deteriorating (spalling) concrete
- Suspected steel fatigue
- No structural redundancy



PROJECT DESIGN CRITERIA

1. Current seismic standards
2. Proposed design for Lagunitas Creek Bridge:
 - Meet vehicular, bicycle & pedestrian needs
 - 12-ft lanes, 4-ft shoulders, 6-ft sidewalks, standard bridge rails
3. Minimize environmental impacts (both community and natural environments)
4. Expedite construction
5. Maintain traffic flow in both directions

PUBLIC INPUT: KEY MESSAGES FROM SCOPING

1. Modify meeting format to allow for public input
2. Investigate a retrofit alternative
3. Construction duration: 2 to 3 seasons is too long.
4. Minimize project impacts on adjacent property owners and access to/from Pt Reyes Station
5. Minimize environmental impacts to wetland and riparian habitats
6. Maintain the current character (color and scale)
7. Study traffic safety
8. Plan for sea level rise

PROJECT UPDATES IN RESPONSE

- Build alternatives
- Retrofit alternative
- Construction methods (Accelerated Bridge Construction – ABC)
- Remaining topics

4 BUILD ALTERNATIVES

1. Steel Truss – Short
2. Steel Truss – Long
3. Pre-cast Concrete Girder
4. Suspension Cable

2 – 3 seasons construction duration to build temporary detour bridge, remove bridge, and replace bridge.



RETROFIT/ REHABILITATE ALTERNATIVE

An advance planning study (APS) is underway.

Only truss would remain – all other structural pieces replaced. Retrofit would likely:

- Require 2-to-3 construction seasons
- Requires a temporary detour bridge for traffic
- Requires extensive in-water work for temporary structural support and piers remain in creek
- Adding standard bridge rails will narrow travel lanes
- Results no shoulders or bicycle lanes
- Unlikely to resemble existing bridge

RETROFIT/ REHABILITATE ALTERNATIVE



*Original truss
scale would
remain*



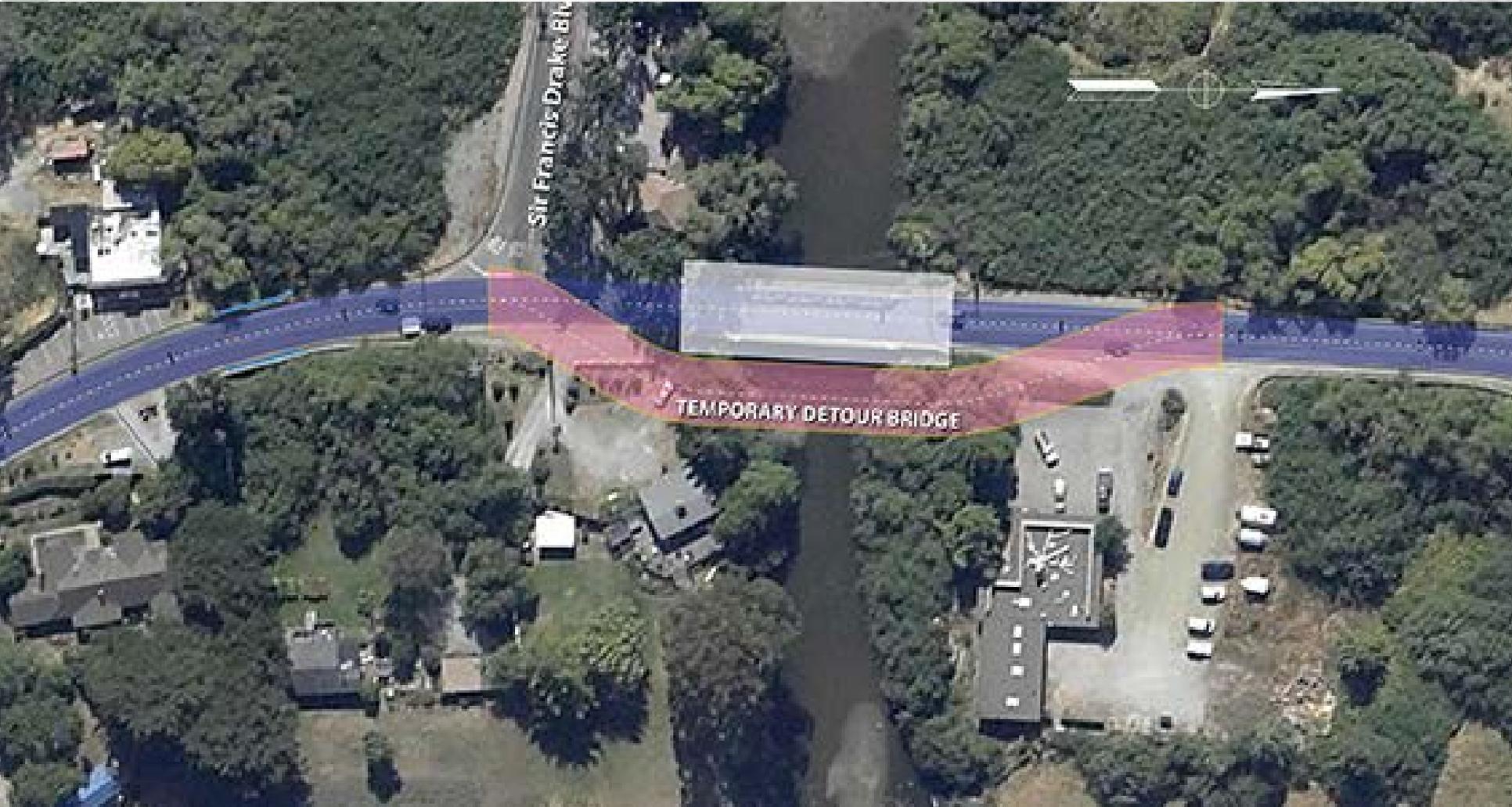
RETROFIT/ REHABILITATE ALTERNATIVE



*Will not resemble
existing bridge*



CONCEPTUAL DETOUR PLAN



ALTERNATIVE CONSTRUCTION METHODS

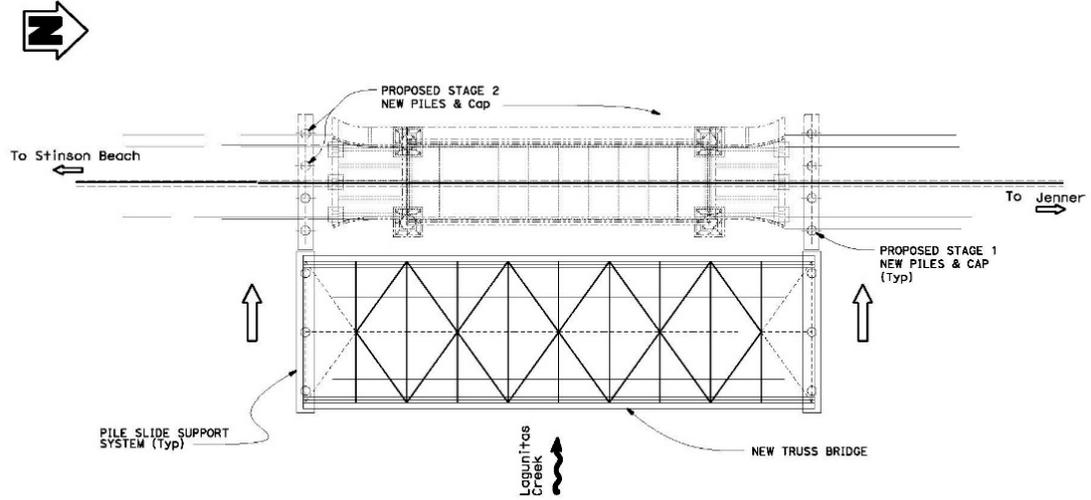
ABC (Accelerated Bridge Construction)

Alternatives may provide:

- Faster/ shorter construction period
- Minimizes traffic disruption
- Potentially fewer environmental impacts
- Does not require building a temporary bridge for traffic detour

PROPOSED ABC CONSTRUCTION #1

Transverse Slide-In Construction



- Detour is not required
- Adjacent right-of-way required to build the bridge
- One construction season
- Short-term full closure(s) required
- Intermittent night closures for one lane of traffic
- Offsite assembly area required
- No piers in creek will reduce environmental impact
- Wider and longer bridge
- Taller bridge truss

PROPOSED ABC CONSTRUCTION #1

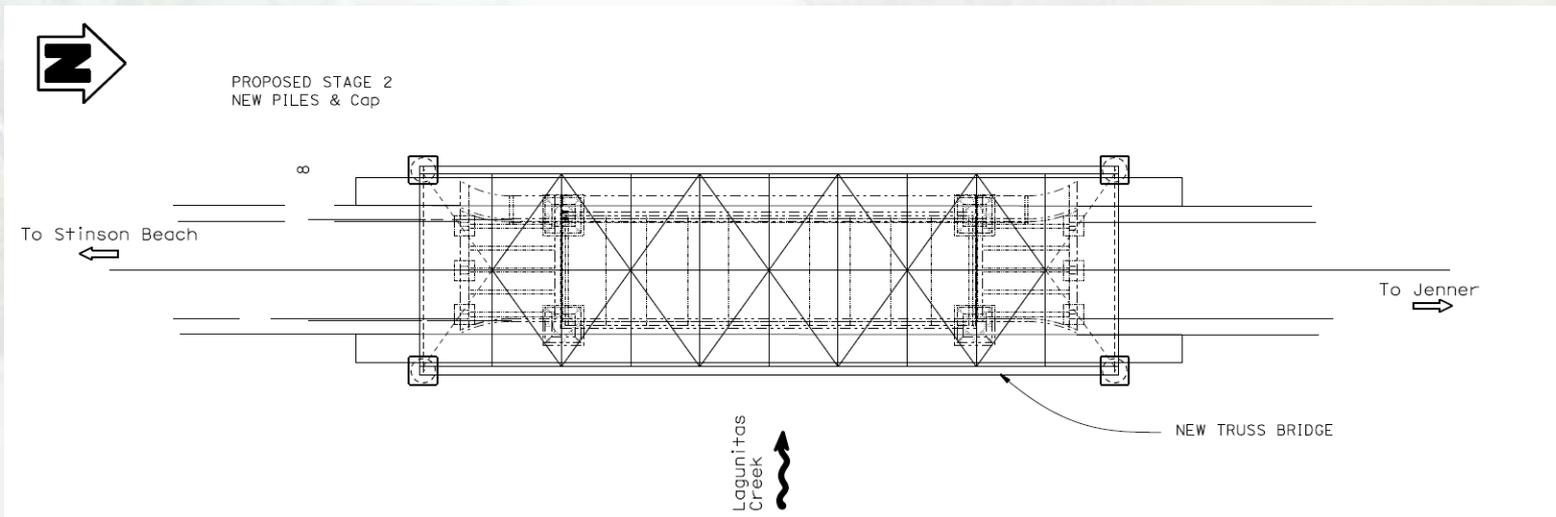
Transverse Slide-In Construction

*Similar to Build
Alternative #2: Steel
Truss - Long*



PROPOSED ABC CONSTRUCTION #2

Longitudinal Move In-Place Construction



- Detour is not required
- Minimal right-of-way required
- One construction season
- Short-term full closures are required
- Intermittent one-lane night closures
- Requires large offsite staging area
- No piers in creek will reduce environmental impact
- Wider and longer bridge
- Taller bridge truss (rectangular /arch)

PROPOSED ABC CONSTRUCTION #2

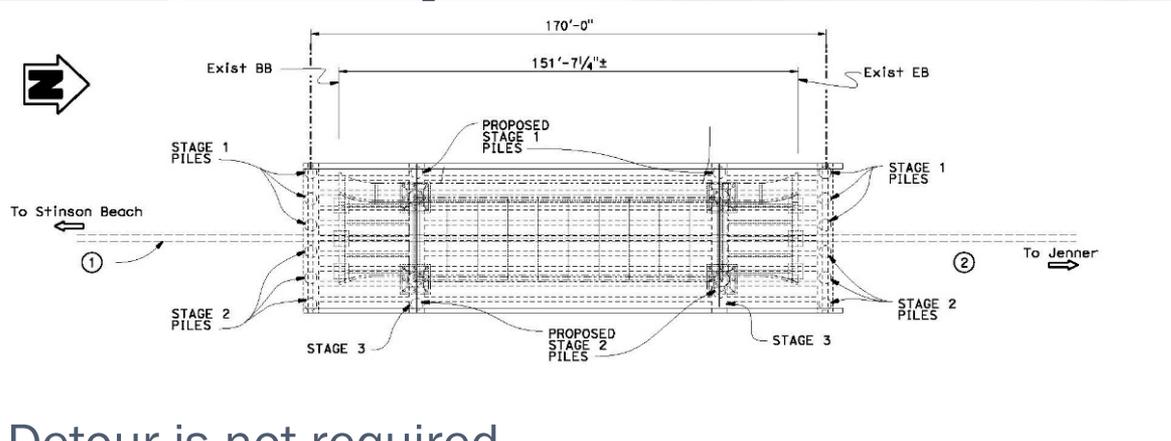
Longitudinal Move In-Place

- Similar to Build Alternative #1: Steel Truss
- Can also be existing truss design



PROPOSED ABC CONSTRUCTION #3

Precast Assembly at Site



- Detour is not required
- Minimal right-of-way
- One construction season is required
- Short-term full closure(s) required
- Intermittent night closures for one lane of traffic
- Requires large offsite staging area
- Piers in creek (same location as existing Piers)
- Wider and longer bridge
- Deeper structure depth
- Decorative truss can be added to match existing character

PROPOSED ABC CONSTRUCTION #3

Pre-cast Assembly On-Site

- *This is the same as Built Alternative #3 Pre-cast Concrete Girder*
- *Decorative truss can be added to match existing character*



REMAINING TOPICS: AESTHETICS

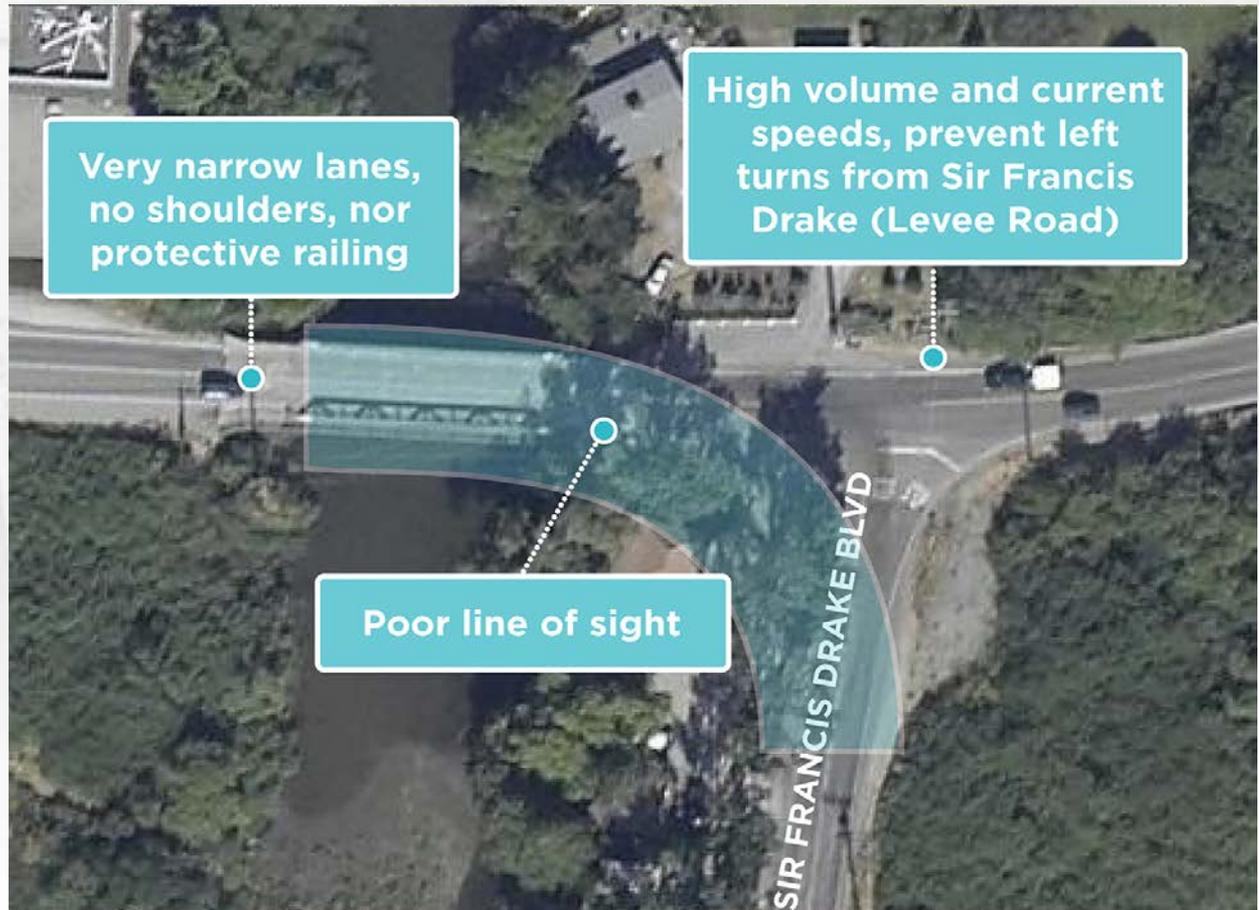
Maintaining current bridge character is dependent on many variables:

- Green truss can be available in most alternatives
- Scale best replicated in Build Alternative #1 (construction requires temporary detour bridge)
- Retrofit may seem the closest, but it has several safety concerns



REMAINING TOPICS: TRAFFIC SAFETY

Any construction detour would need to maintain two-direction flow



REMAINING TOPICS: PLAN FOR SEA LEVEL RISE

- Several models predict that the coast sea level will rise between 4 and 6 feet at the shoreline (Tomales Bay) in 100 years
- At that time, the Sea Level Rise would only result in less than 1/2 inch rise in water-elevation during a 100-year flood event at the Lagunitas Creek Bridge
- Sea-level Rise will continue to be considered in the bridge design

ENVIRONMENTAL PROCESS

Public/ agency outreach	Public and Agency Scoping Process	Project updates	Notice of availability	Public hearings Environmental Document review and comment		Review final Environmental Document and response to comments
						
Key Milestones	Project Scoping	Develop a reasonable range of alternatives	Preparation of Draft Environmental Document	Environmental Document available for public review and comment	Develop Final Environmental Document	Notice of determination - Decision Document
Environment al Process	<ul style="list-style-type: none"> • Surveys • Existing conditions • Constraints and opportunities 		<ul style="list-style-type: none"> • Impacts and mitigation measures 	<ul style="list-style-type: none"> • Review public and agency comments 	<ul style="list-style-type: none"> • Refine Environmental analyses in response to comments 	
Regulatory Consultation	<ul style="list-style-type: none"> • USFWS on ESA • USACE on wetlands and 404 process • SHPO on cultural resources • Initiate Native American Consultation 					

2 to 3 year process



**THANK YOU FOR LISTENING, NOW WE WANT TO
HEAR FROM YOU**

*Please don't forget to turn in your written
comments to our welcome desk!!*