

CALIFORNIA DEPARTMENT OF TRANSPORTATION, DISTRICT 4

# Cordilleras Creek Bridge Replacement

**PROJECT STATUS, OUTREACH,  
AND CONSTRUCTION STRATEGY**



# AGENDA & PRESENTERS

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Project Overview



Construction Staging



Traffic Planning



Next Steps



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*Regional Project Manager*



**KOUROSH LANGARI**  
*Project Engineer*

# PROJECT OVERVIEW & STATUS

## PURPOSE & NEED OF PROJECT

- The existing bridge is at the end of its service life and needs replacement.
- If not addressed, poor structural conditions would ultimately affect the safety of the traveling public.



# Benefits

- Maintaining connectivity and safety for the public traveling along this stretch of U.S. 101
- Assist in resilience to sea level rise
- Enhancing hydrology function
- Improving fish passage within the channel





# Location

Cordilleras Creek Bridge on U.S. Highway 101 (U.S. 101) in **Redwood City in San Mateo County** between Whipple and Brittan Avenue exits.

# Planned Work

- Replace the existing triple box culvert with a single span bridge.
- The replacement bridge will retain a 6-lane configuration.



# Environmental Findings

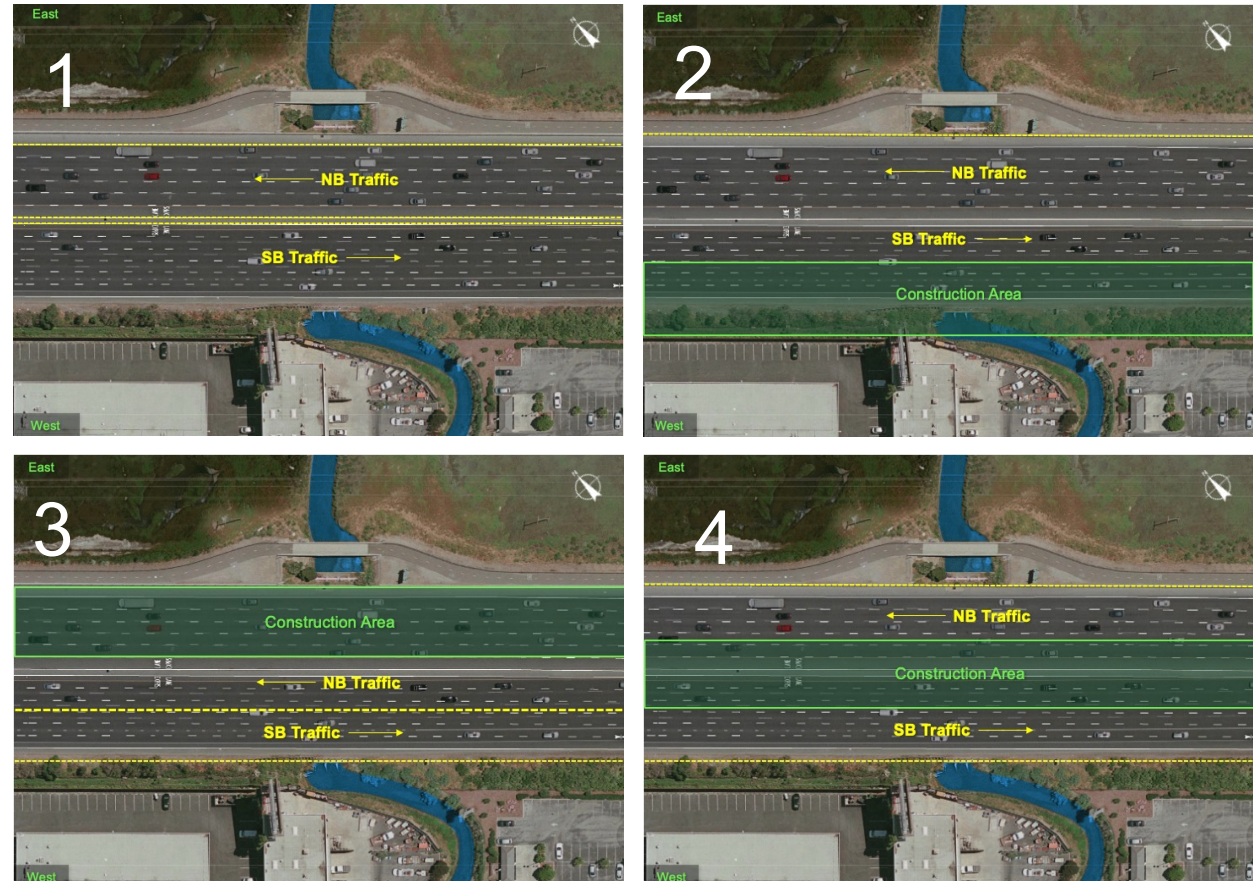
- Environmental studies revealed sensitivities regarding the **creek habitat**.
- Due to these sensitivities, all work in the channel must occur during the dry season: **June through October**.
- **6 environmental permits** were obtained to work in the creek.

JAN	FEB	MAR	APR
MAY	JUNE	JULY	AUG
SEP	OCT	NOV	DEC

# CONSTRUCTION STAGING

## TRADITIONAL CONSTRUCTION METHOD

This method requires the shifting of lanes depending on which side of the freeway is under construction.





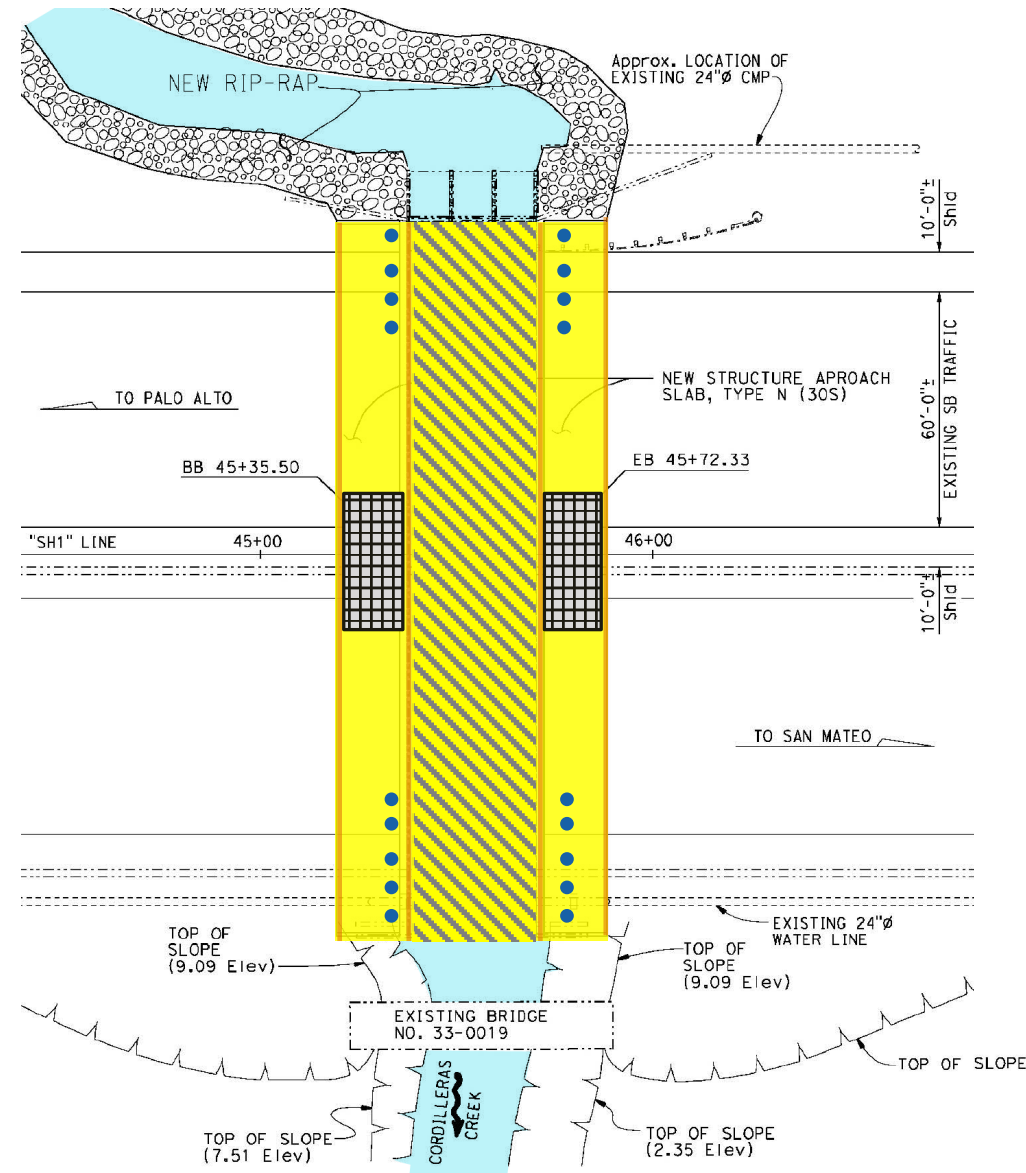
# Traditional Construction Example: San Francisco Bridge








# Cut & Cover Method

This method entails building new structure over the existing box culvert and removing box culvert after completing bridge.

No lane shifting required.



-  Example grate covering that will extend the length of the bridge abutment
-  Precast voided slab
-  Existing reinforced concrete box culvert
-  Shoring
-  Piles



# Steps to Cut & Cover Method



Remove asphalt and excavate for shoring and installation



Install pilings and prefabricated abutments



Cover the excavated opening at end of each working shift with moveable steel plate/grate

# Benefits of Cut & Cover Method

## TRADITIONAL



Construction time spans **3 years**



**Pile driving at night**, resulting in noise complaints



**Impacts on traffic** for 3 years



**Impact** on express lane operation and lost revenue



**Exposure to construction** for 3 years



**3 seasons of creek diversion** over 3 years



**3 years of construction** means higher cost



**ABC process not possible** using this method



**31-foot bridge opening** limits tidal and drainage function

## CUT & COVER

Construction time spans **just 1 year**

**Daytime pile driving** on weekends, less noise complaints

**Impacts on traffic** for just 4 weekends and nighttime closures during 1 year

**No impact** on express lane operation

**Enhance safety** with reduced exposure to 1 year

**1 season of creek diversion**

**1 year of construction** will cost less

**ABC process possible** using this method!

**40-foot bridge opening** enhances tidal and drainage function



# TRAFFIC PLANNING

REDUCING CLOSURE TIME IS KEY



VS.



4 weekend closures (10:00 pm  
Friday- 5:00 am Monday)  
during **summer and fall of 2023**  
using Cut & Cover Method.

Several closures **spanning 3**  
years using Traditional  
Construction Method.

# 2023 Closure Weekends

Using the ABC method will require two 55-hour long weekend closures for each side of the highway (northbound and southbound), from **10:00 pm Friday night to 5:00 am Monday morning**.

## SOUTHBOUND ESTIMATED CLOSURE AND DETOUR



**June 23-26, 2023**  
**July 14-17, 2023**

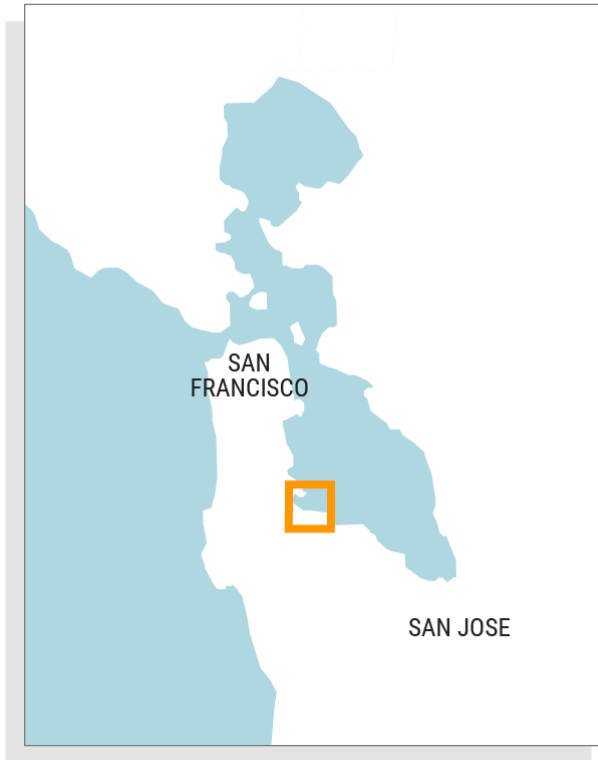
## NORTHBOUND ESTIMATED CLOSURE AND DETOUR



**August 25-28, 2023**  
**September 15-18, 2023**

***PLEASE NOTE: All dates are tentative.***

# Traffic Considerations



- Current traffic volume along U.S. 101 in this area averages 240,000 vehicles per day (Annual Average Daily Traffic\*).
- There are regional effects to traffic when sections of U.S. 101 are closed.
- Holiday schedule during construction season.

\*Table 2.1.7-1 in Section 2.1.7 (AADT; Caltrans 2020a).

# Traffic Mitigation Measures



USE OF PORTABLE  
CHANGEABLE MESSAGE  
SIGNS (PCMS)



COORDINATION  
WITH NAVIGATION APPS

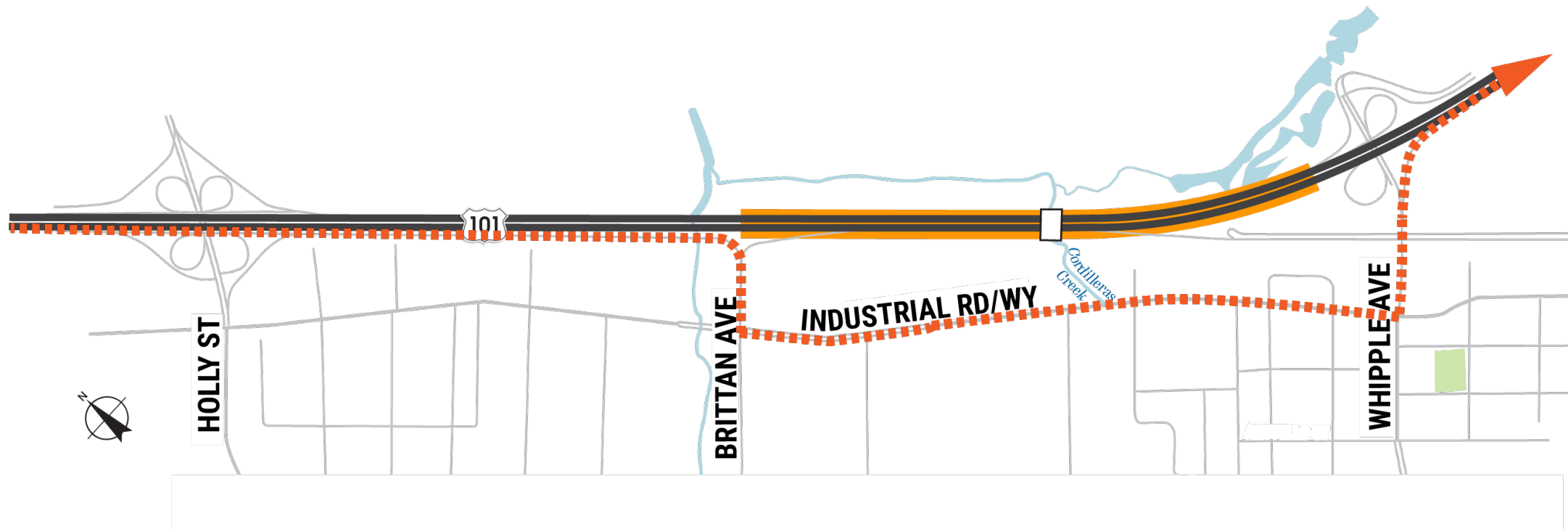


OUTREACH  
TO AIRPORTS



COORDINATION  
WITH FOURTH OF  
JULY AND LABOR DAY EVENT  
ORGANIZERS

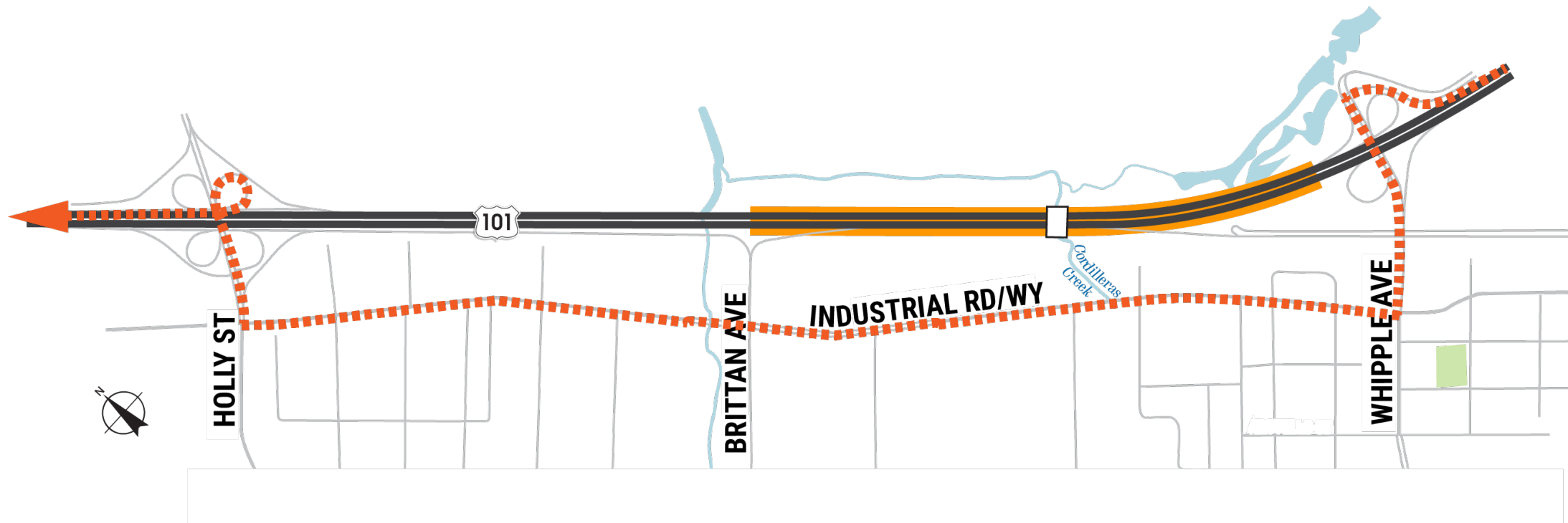
# Southbound Designated Detour



# Local Southbound Alternate Routes

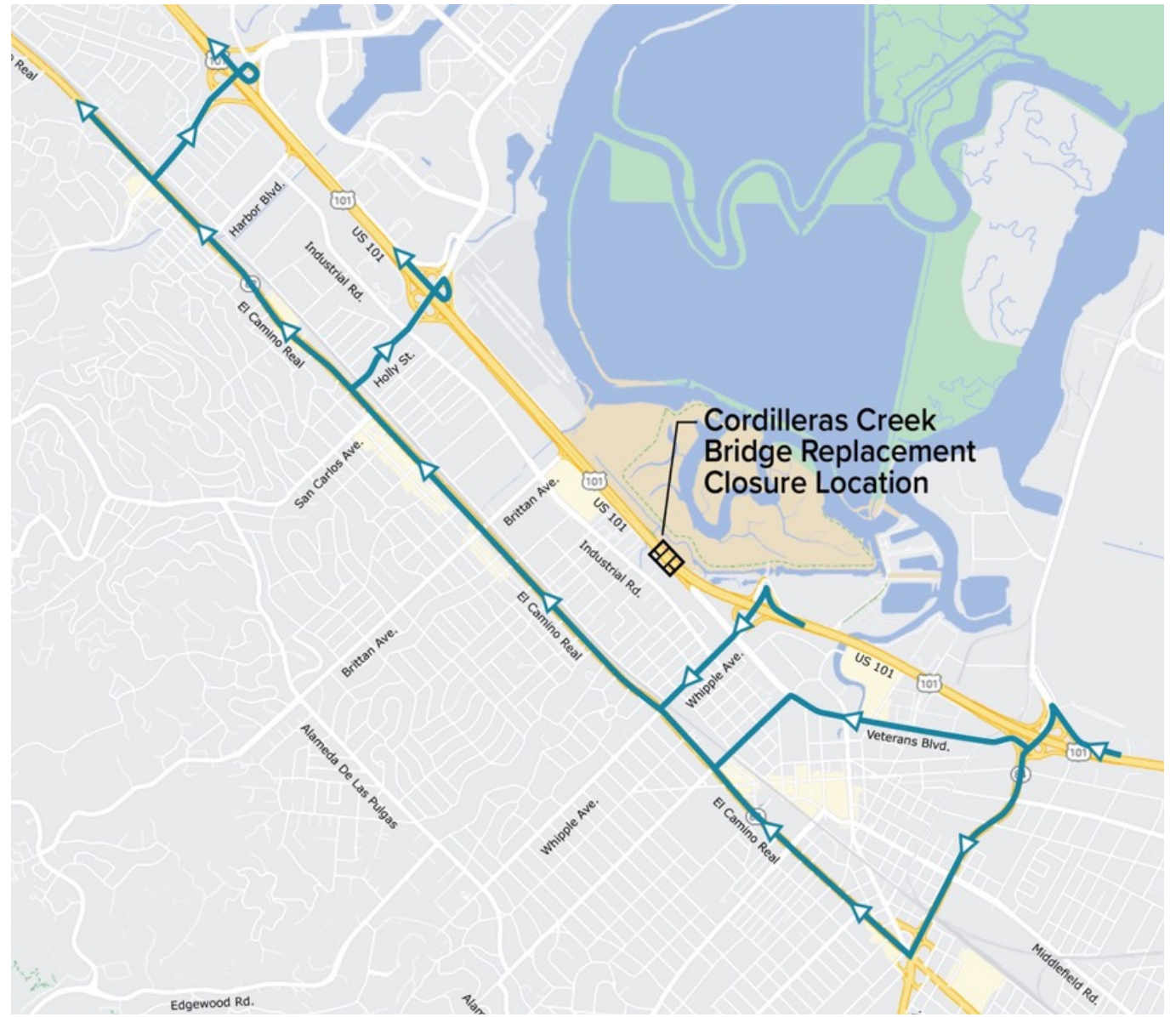


# Northbound Designated Detour



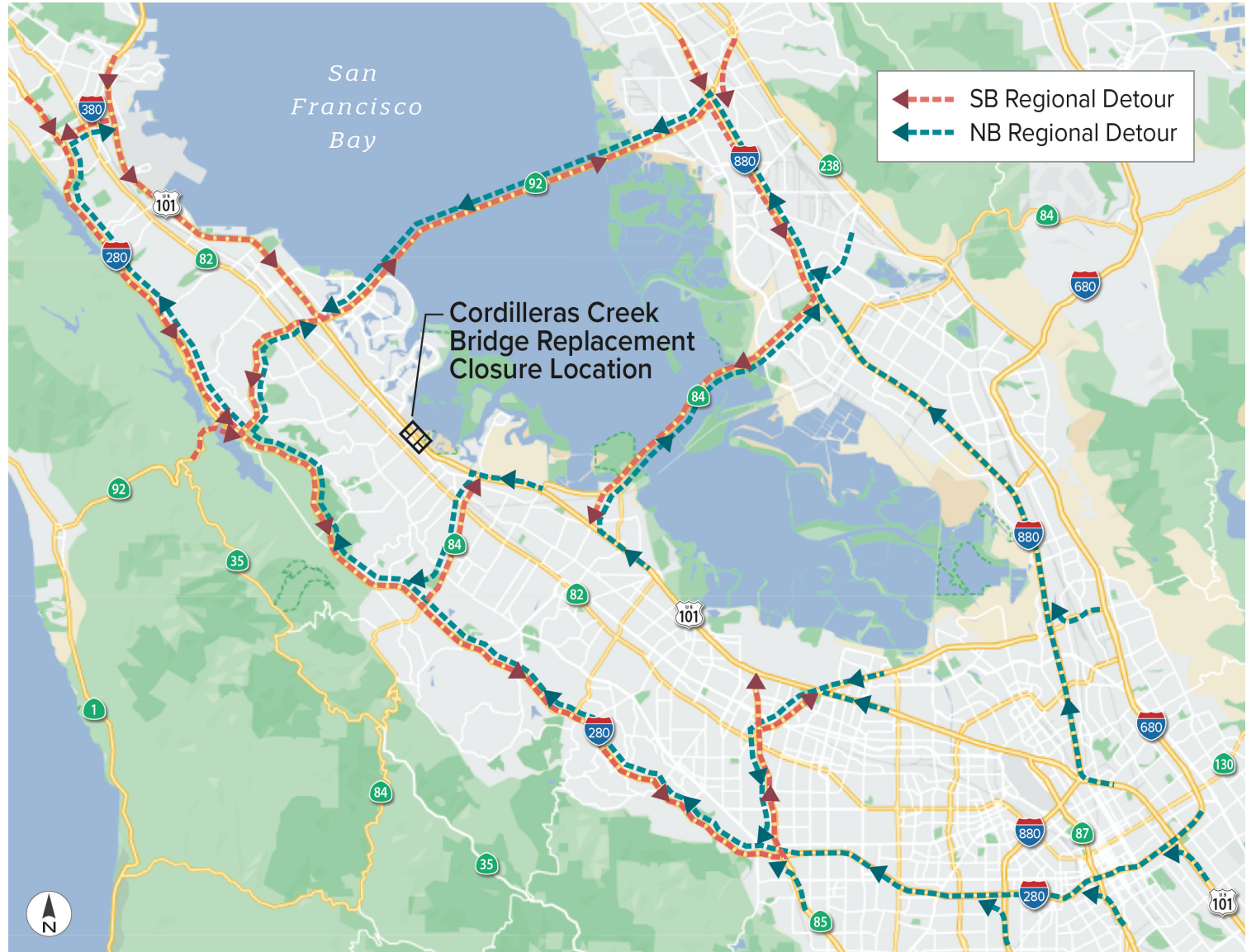


# Local Northbound Alternate Routes





# Regional Northbound & Southbound Alternate Routes



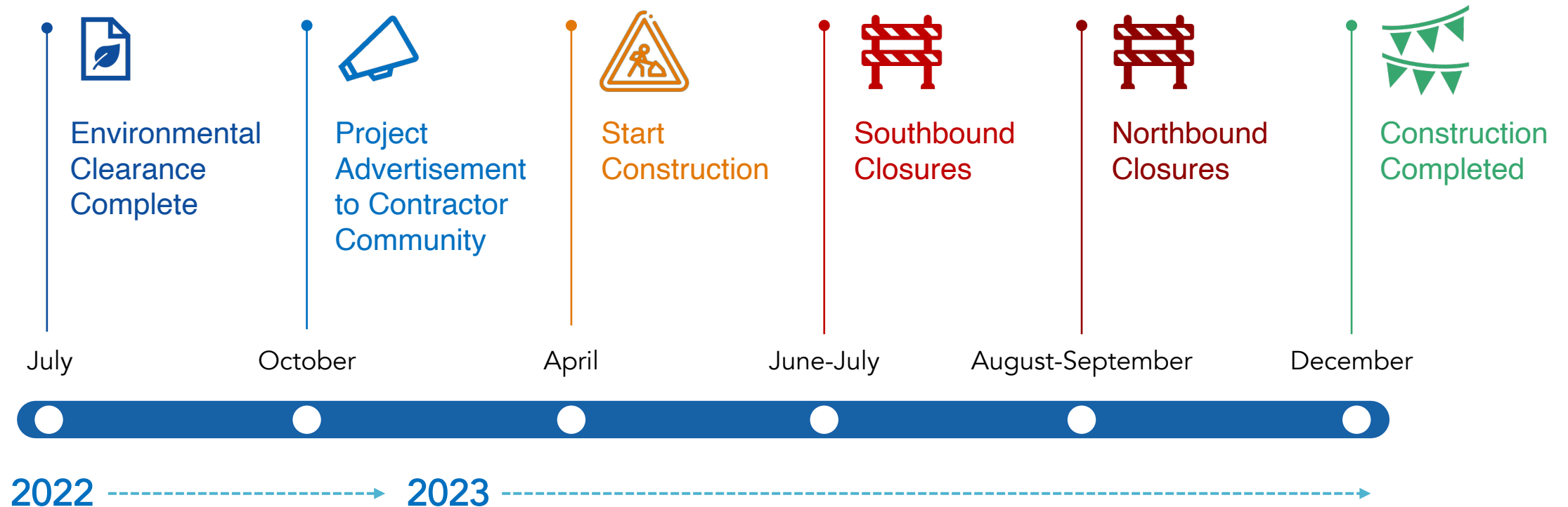
# Outreach Efforts

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- **City/County Engineers Association:** Presentation to Board – 3/16
- **SFO and San Carlos Airports:** Presentation to key staff – 3/23
- **CHP:** Presentation to key staff – 3/23
- **SMCTA:** Presentation to Board – 4/6
- **C/CAG:** Presentation to Board – 4/13
- **San Mateo Chamber of Commerce:** Outreach partnership
- **Redwood City:** Coordination with staff & neighborhood associations
- **San Carlos:** Coordination with staff
- **Project website and factsheet:** [CordillerasBridgeReplacement.com](http://CordillerasBridgeReplacement.com)

# NEXT STEPS

## PROJECT MILESTONES





# Thank You

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CordillerasBridgeReplacement.com

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