

San Francisco Creek Bridge

Emergency North Embankment Restoration Briefing with Stakeholders

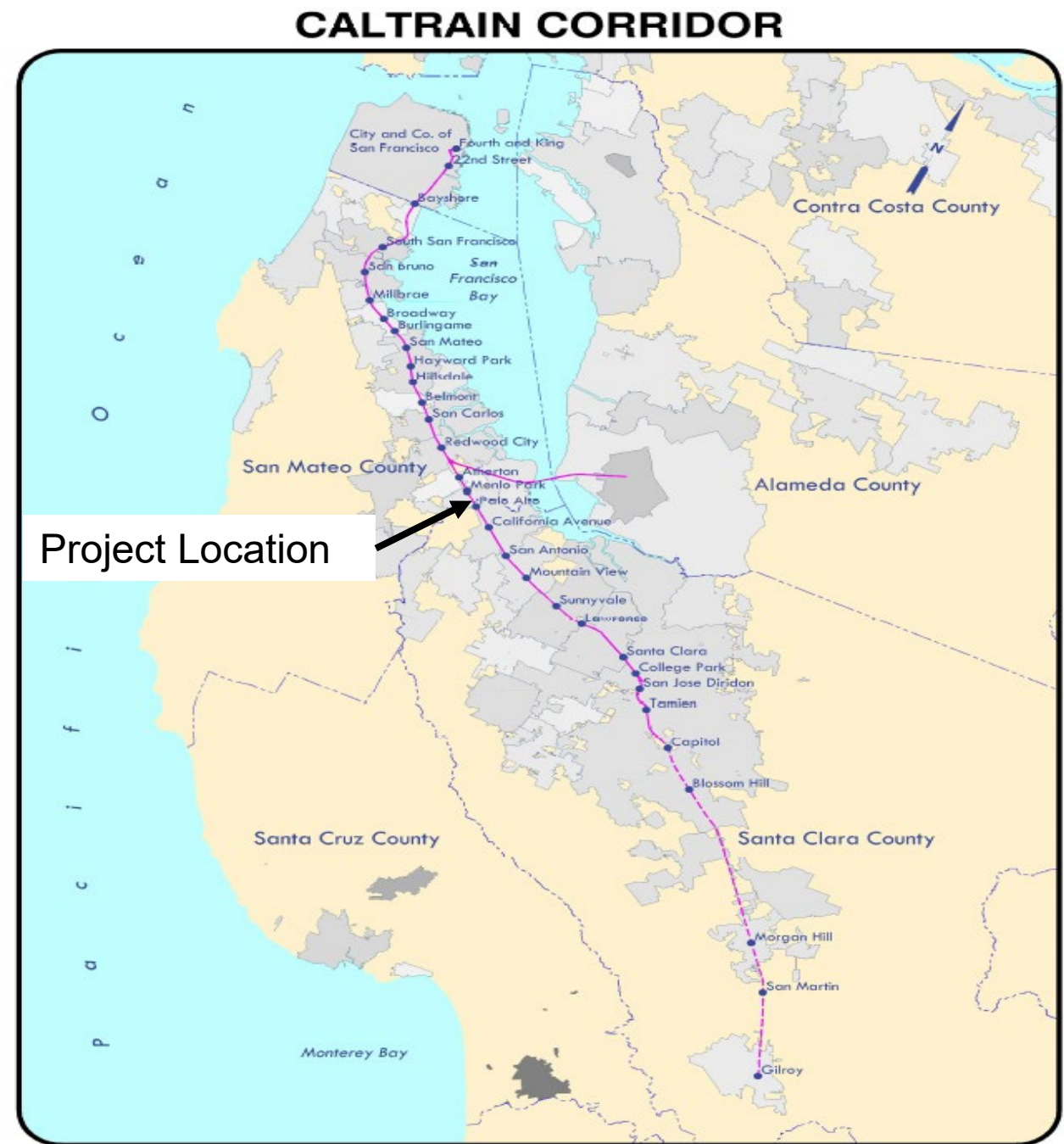
March 23, 2023



San Francisco Creek Bridge

Emergency North Embankment Restoration

Project Location



Geographic Location Overview



San Francisquito Creek Bridge

Winter Storm Events (2023)

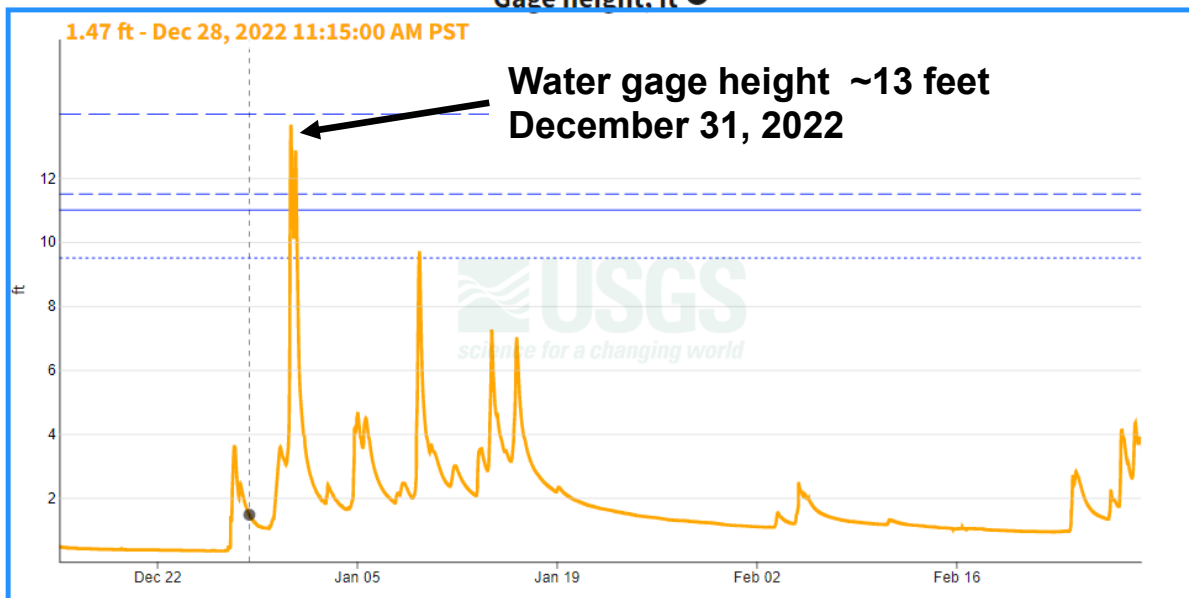
☐ 7 days ☐ 30 days ☐ 1 year

- using graph zoom -

San Francisquito C a Stanford University CA

December 15, 2022 - February 28, 2023

Gage height, ft ⓘ



Current: — Provisional
Action stage: - - - 9.5 ft
Minor flood stage: — 11 ft
Moderate flood stage: - - 11.5 ft
Major flood stage: — 14 ft



- <https://waterdata.usgs.gov/monitoring-location/11164500/#parameterCode=00065&startDT=2022-12-01&endDT=2023-03-10>

San Francisquito Creek Bridge

South Embankment

Post-storm site inspection South Embankment:

- Creek water elevation **has receded** after the storm event and measures 25-feet below the bridge soffit
- South bank below the railroad bridge bearings has **concrete wall** providing protection for both the abutment and **historic El Palo Alto Tree**
- **Moderate scour** has been observed at the toe of the concrete wall due to high water velocity

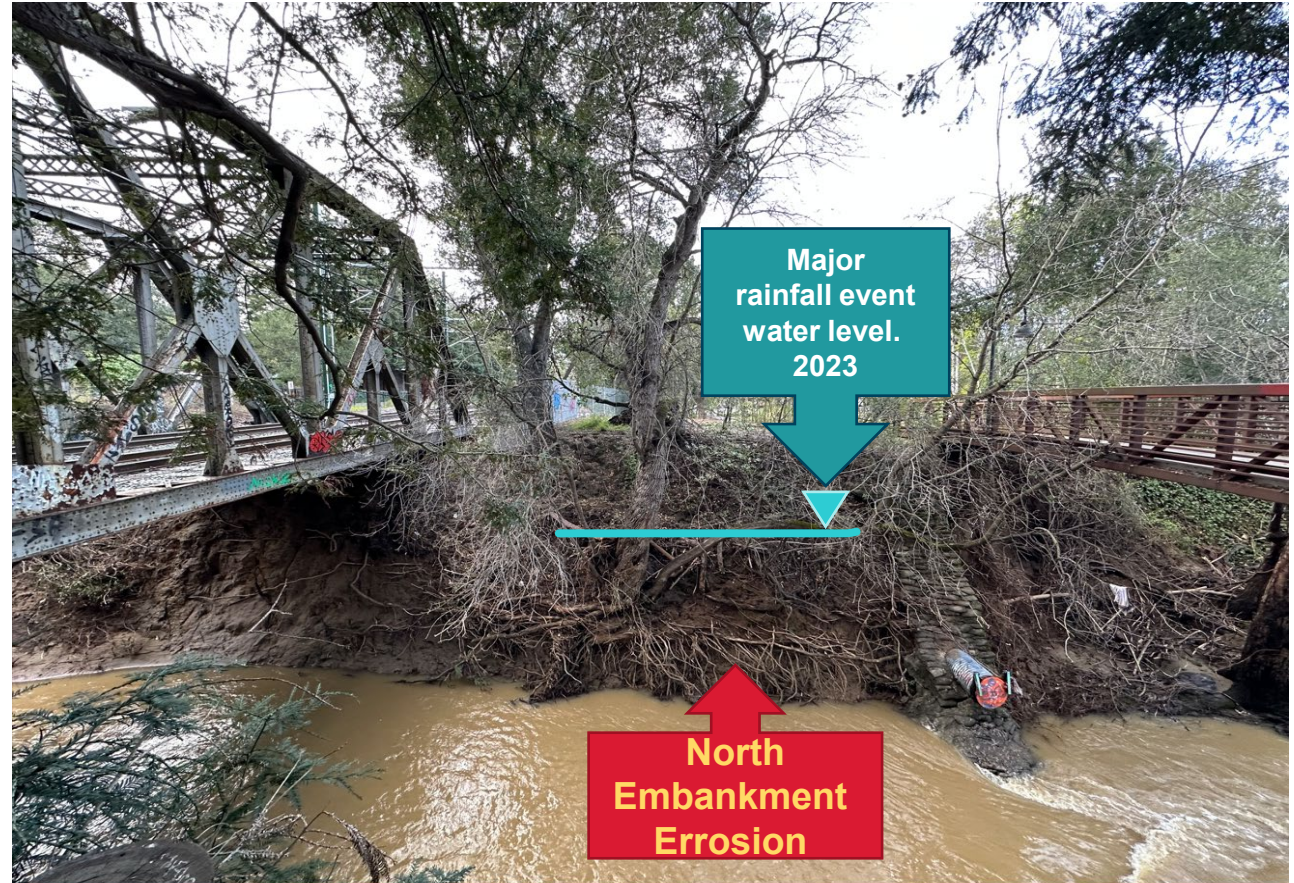


San Francisquito Creek Bridge

North Embankment Scour

Post-storm site inspection North Embankment:

- North bank abutment slope protection below **Caltrain's railroad bridge** has been **severely scoured** and **undermined** to a near vertical condition
- The adjacent slope embankment and large diameter **tree root mats** are showing signs of significant **erosion** and **scour**
- Current conditions **exceed 1.5 to 1** maximum for soil slope stability
- Soil will continue to **erode** and become **unstable** without mitigation



San Francisquito Creek

Outfall Embankment Scour

Post-storm site inspection North Embankment:

- Nearby storm **drainpipe outfall** from Palo Alto Park has also experienced **sever scour** and **embankment erosion**
- Outfall slope cement bags protection has **lost** supporting soil compromising the **structural integrity**



San Francisquito Creek

Pedestrian Bridge Embankment Scour

Post-storm site inspection North Embankment:

- Palo Alto Park's **pedestrian bridge** abutment slope protection has also been **severely scoured** and **undermined** to a near vertical condition
- Current conditions **exceed 1.5 to 1** maximum for soil slope stability
- Soil will continue to **erode** and become **unstable** without mitigation
- Caltrain will continue to coordinate with **Palo Alto** and **Menlo Park** regarding post storm conditions

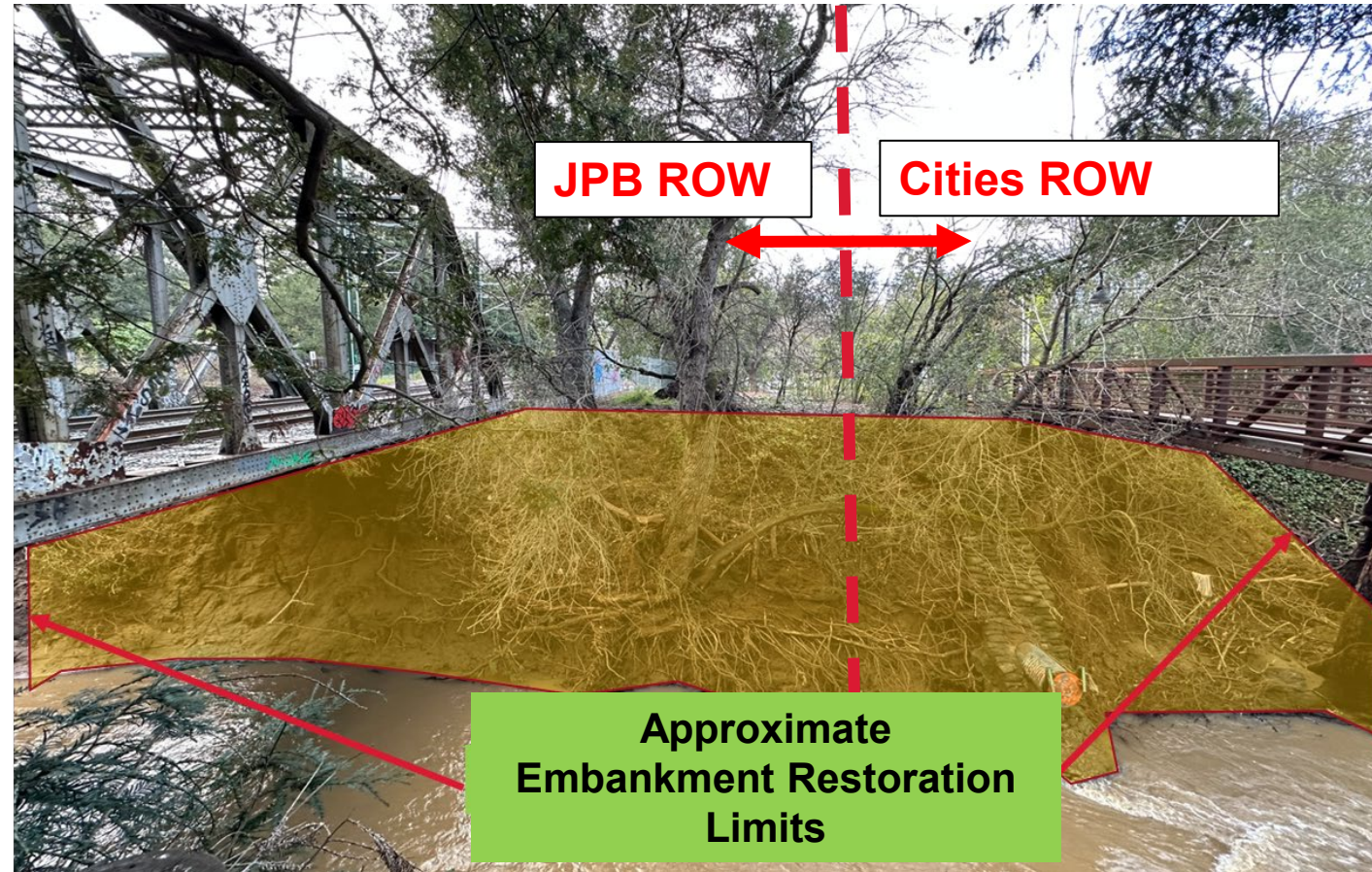


San Francisquito Creek

Embankment Restoration Limits

Project Restoration Limits:

- Approximate restoration **limits** from **east** of Caltrain's railroad bridge to **west** of Palo Alto's pedestrian bridge (shaded area)
- Embankment restoration **extent** and **method** subject to **hydraulic** modeling analysis and approval from the environmental **permitting agencies** and coordination with **adjacent property owners**



Schedule Overview

Date	Activity
March 2023	Issue Work Directives for Design, environmental permitting, cost estimating, and construction management support
March 2023	Begin coordination with external stakeholders (on-going)
March 2023	Declare emergency and obtain authority to approve all plans and designs and enter agreement with Walsh Construction
April 2023	Develop preliminary design
April 2023	Submit for environmental permits
April 2023	Submit for permits to Jurisdictions Owners
May 2023	Final design
*June to October 2023	Project channel construction
December 2023	Project closeout

***Creek access window is from June 1st through October 15th**

Probable Construction Costs

Company	Grand Total Bid Price
*Engineer's Estimate	TBD
*Third Party Estimate	TBD
*Walsh Construction Company II, LLC, Concord, CA	TBD

*Project team working to obtain an estimate of probable costs subject to approval by permitting agencies of proposed **restoration method and extent**

Summary of Next Steps

- Board of Director's Meeting, Wednesday, March 29th @ 9 AM
 - **Request emergency status** due to erosion and scouring caused by recent winter storms
- Identifying **contingency funds** for emergency repair work at the North Channel
- Assembling consultant support for: **cost estimating, design, environmental permitting, and construction management**
- Engage in **coordination meetings** with City of Palo Alto, City of Menlo Park, San Francisquito Creek JPA, Stanford, Valley Water, U.S. Army Corps of Engineers, Regional Water Quality Control Board, and the National Marine Fisheries Services to coordinate on **design and construction**, as well as obtain information on **necessary permits**
- Regularly **monitoring condition** of embankment especially following significant storm events

**Questions &
Discussion -**

**Thank you for your
time**



Requested Board Actions

- **Authorize emergency repairs**
- Delegate to the Executive Director, or designee, the authority to **approval all plans and or designs** with regard to the emergency repair
- Authorize the Executive Director, or designee, **to enter into a contract** with Walsh Construction Company II, LLC for emergency repairs
- Authorize Executive Director, or designee, **all other actions** required to respond to the emergency provided the Executive Director **reports such actions to the Board** at each **monthly** Board meeting until the emergency situation is resolved, with a **final report** to be made at the first Board meeting after the emergency is resolved