



Corridor Crossings

STRATEGY



Caltrain Corridor Crossing Strategy Update

01.04.24



21
Jurisdictions

15
Active Projects



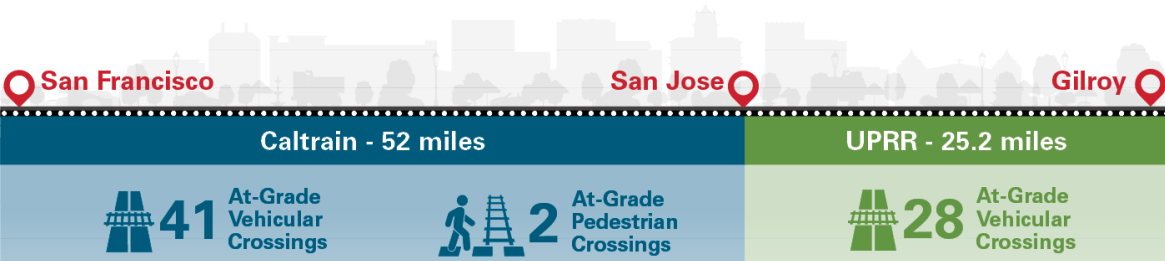
Caltrain Corridor Crossing Strategy

As an outcome of the **Caltrain Business Plan**, the Corridor Crossings Strategy is an effort to **define a systematic corridor-wide approach** to crossings.

The strategy aims to **align the ambitions of community partners into balance with an implementable program**, addressing:

- Program Delivery
- Organization
- Funding

Note: Active grade separation projects will continue in parallel



Program Strategy



Corridor Crossings
STRATEGY

Paths



Project Delivery Opportunities

Communicate roles, responsibilities, processes, and standards for individual projects.

Outcome: Crossings Delivery Guide



Program Strategy Development

Develop a shared, corridor vision with an incremental and implementable approach for regional benefits.

Balance vision with implementable action plan

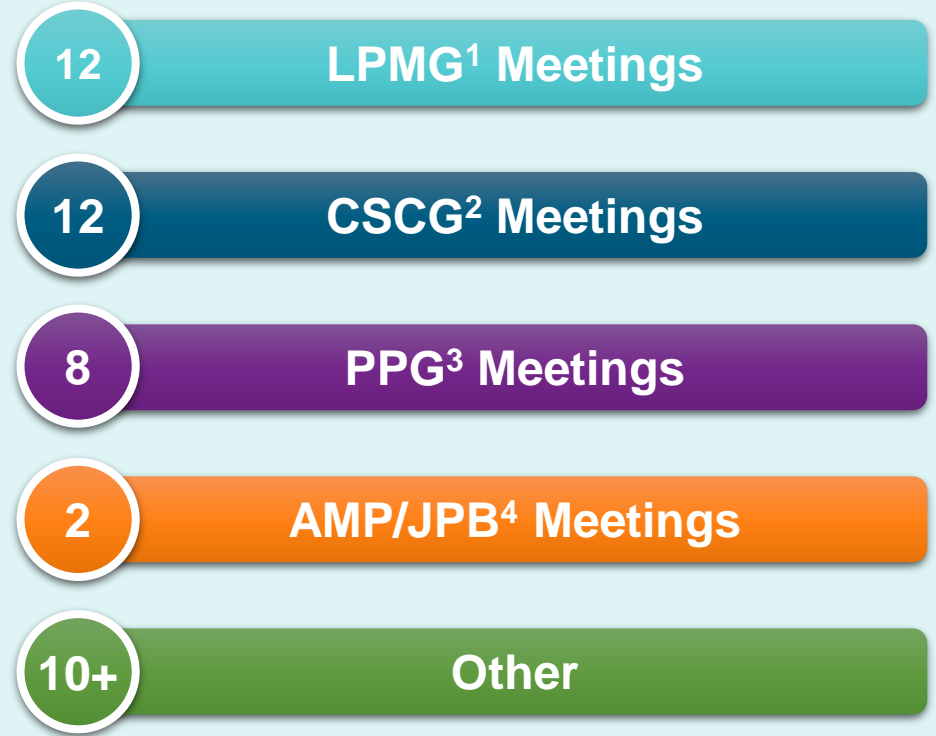
Outcome: Program Vision and Strategy



Partners Desire...

- 📢 A **consolidated and coordinated program to accelerate delivery** of grade separation projects and to strategically pursue funding
- 📢 A **proactive and consistent Caltrain role** in delivering grade separation projects and **leveraging institutional knowledge**
- 📢 A **consistent and transparent process** for grade separations
- 📢 An **active, integrated role for cities** to reflect community vision through delivery of the program project

Throughout the life of the CCS, we have presented at...



¹Local Policy Makers Group

²City/County Staff Coordination Group

³Project Partner Group

⁴Peninsula Corridor Joint Powers Board (JPB) and JPB Advocacy and Major Projects (AMP) Committee

Delivery Guide



Corridor Crossings
STRATEGY



Crossings Delivery Guide

Consolidated and
coordinated program

Proactive &
consistent role

Consistent and
transparent
process

Active, integrated
role for Cities



Crossings Delivery Guide

- Created out of a request from community partners to have a more consistent and transparent process for grade separation projects.
- Aims to provide a consolidated location of applicable design, construction, and operational standards for implementing a grade separation project.
- Clearly defines the processes, procedures, practices, roles, and responsibilities of Caltrain and local partners needed to implement a grade separation or closure of an existing crossing.

Crossings Delivery Guide: Next Steps

1. **December 2023/January 2024:** Jurisdictions/Agency/TAs Review Draft
2. **January 2024:** Receive Comments and Incorporate Revisions
3. **February/March 2024:** Finalize Guide. Post publicly with periodic updates as new/updated guidance is available

BRIDGE

- 1 Caltrain requires vertical clearance from the top of the Caltrain tracks to the top of the underpass structure. For overhead crossings, Caltrain requires clearance requirements above the OCS equipment. See Chapter 7 for the specific clearance requirements.
- 2 Retaining walls provide structural support

OVERHEAD CATENARY SYSTEM (OCS)

- 3 The OCS equipment influences the construction requirements, as well as the vertical clearance requirements for overhead crossings.

FENCING

- 4 **Protective Barrier:** A solid barrier is provide safety due to differences in elevation.
- 5 **Access Control Fencing:** For passenger safety, fencing may need to be installed to separate passengers from vehicular traffic and the railroad. This includes fencing between the railroad tracks, as well as fencing to separate stations from adjacent streets

PEDESTRIAN AND BIKE ACCESS

- 7 Stairways and universal access ramps provide access to the underpass for various ages and abilities. Bike grooves should be provided on stairways to provide cyclists an easier method to transport their bicycle through the facility.
- 8 Bike lockers offer a secure form of bicycle storage at crossing facilities, in particular at stations.
- 9 Plaza areas around crossing entrances can activate the area and provide an inviting place for the community. Entry areas to undercrossings should be well-lit and maintained.
- 10 Convex mirrors and CCTV cameras can contribute to safety and an improved sense of security.

LIGHTING

- 10 Pedestrian-scale lighting should be implemented throughout an undercrossing and the entrance and exit areas. Good visibility improves safety and the sense of security for users.
- 11 Skylights can be used in an underpass to provide more natural light in the tunnel, leading to a more secure-feeling facility.

ACCESS

- 12 Wayfinding signs help users orient themselves spatially along the Caltrain corridor and can help users understand where the undercrossing ends on the other side of the tracks.

DRAINAGE

- 12 Implementation of permeable facilities and greenery assists the drainage system and makes the undercrossing facility more attractive.
- 12 Drainage systems are required to manage storm water. In underpass facilities, removing water from the facility typically requires an electrified pump station due to the lower elevation.



Building the Program

*How We are Incorporating
Community Partner Feedback*



Corridor Crossings
STRATEGY



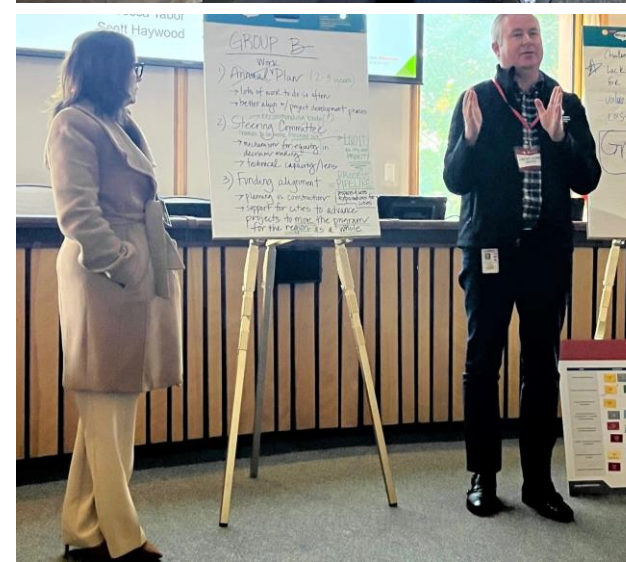
November Workshops

Local Policy Maker Group (LPMG) and City/County Staff Coordination Group (CSCG)

- 50 + total attendees
- CSCG workshop included TA staff, who are part of the Project Partner Group

Discussed:

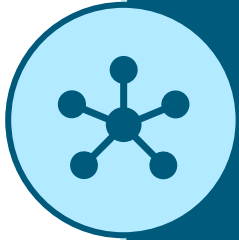
- Program Development
- Components of Investment Program
- Importance of Clear Roles and Responsibilities of an Integrated Program



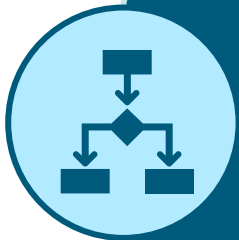


November Workshop Feedback

City Staff Coordinating Group



Develop a **consistent multi-year program** to guide crossing investments **shared across corridor stakeholders**



Caltrain in position to **lead program development; endorsement and approval roles** for other stakeholders

Local Policy Maker Group



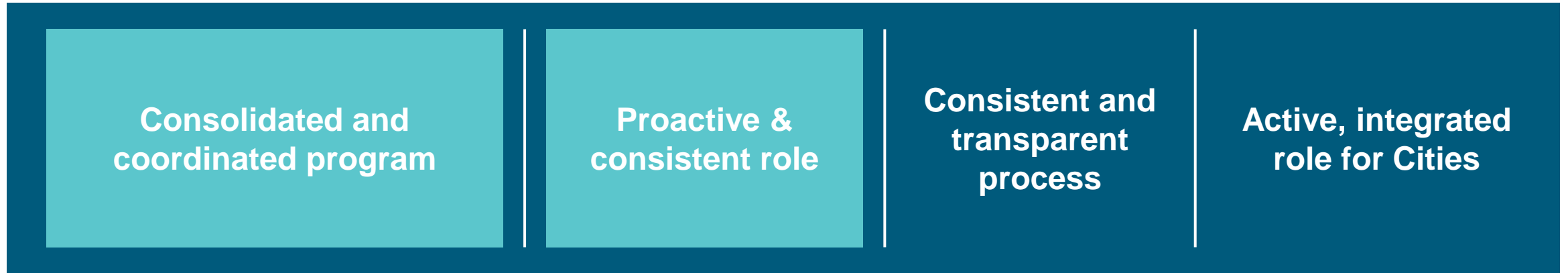
Confirmed staff feedback: strong structure of developing, endorsing, and adoption for a coordinated delivery and **funding approach**



Emphasized the corridor “mega” need and organized into **investment tiers**



Convergence on a Corridor Approach



Approach A:
Independent Projects

Approach B:
Coordinated Program

Approach C:
System-Wide





Coordinated Program Approach

SEPT 2018 (PP)

Based on technical topics and community partner feedback a **coordinated program approach** brings the following benefits:

- ✓ *Allows for a holistic methodology in implementing corridor crossings improvements*
- ✓ *Considers the unique characteristics along the corridor, and allows for implementation that considers geography, jurisdictions, and service*
- ✓ *Leverages the advantages of integrated planning, design, and delivery of projects within the corridor*

*** Not a “one-size-fits-all” solution for the whole corridor ***

*** Cannot currently be accommodated with existing staff resources ***



Elements of the Coordinated Program



Integrated Delivery Team



Operations and Construction Coordination



Project Packaging/ Staging/Approvals



Administrative/ Funding



Rail Crossing Elimination (RCE)

FY22

- First year of this USDOT Program
- 4 jurisdictions on the Caltrain Corridor applied
- City of Palo Alto was successful and awarded \$6M
- Total Funding Available for Award Under FY 2022 NOFO: \$573,264,000



FY23

- Second year of this USDOT Program, NOFO anticipated soon
- **USDOT feedback has been that corridors with prioritized applications are more competitive for funding**
- Grants range in scale \$500K- \$40M | 11 >\$15M
- Opportunity to coordinate Corridor Crossings Strategy investments

Program Strategy Next Steps



January 2024: Draft Program Strategy Report Summarizing the Technical Work and LPMG/CSCG insights and recommendations



First Quarter of 2024: Continued collaboration with corridor partners, local jurisdictions, member agencies, and community partners



March and April 2024: AMP and JPB presentations/direction of Program establishment and implementation approach



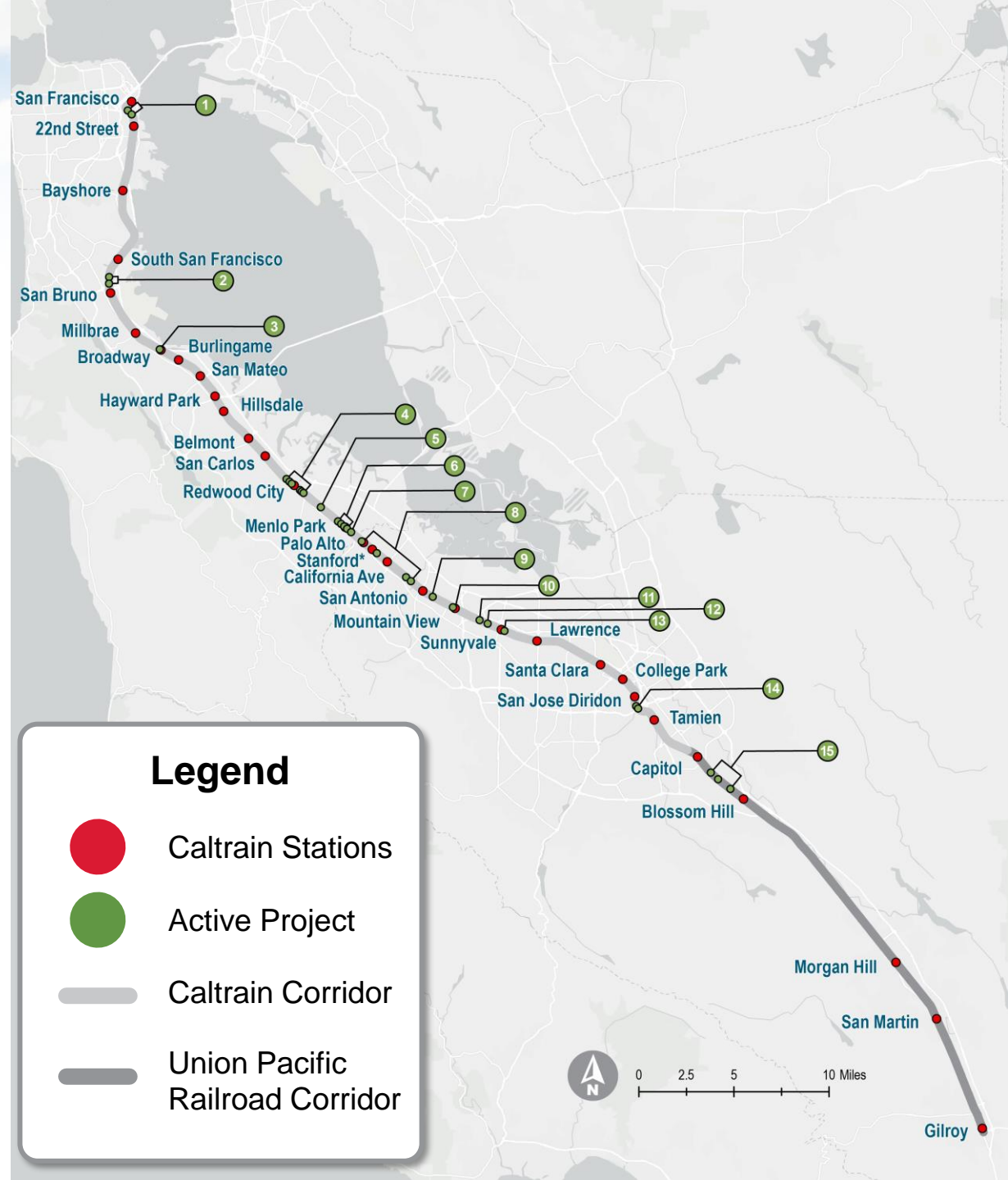
Discussion Questions

1. Do you agree with the coordinated delivery approach, is there anything else that should be considered?
2. How does the TA see its role evolve in terms of funding and overseeing grade separation projects under a coordinated program?
3. What strategies could enhance individual jurisdiction buy-in to the coordinated approach?



Active Projects on the Caltrain Corridor

- ① Pennsylvania Avenue Extension
- ② South Linden Avenue and Scott Street Grade Separation
- ③ Burlingame Broadway Grade Separation
- ④ Redwood City Grade Separation Study
- ⑤ North Fair Oaks Bicycle, Pedestrian Railroad Crossing, and Community Connection Study
- ⑥ Menlo Park Grade Separation Project
- ⑦ Middle Avenue Undercrossing
- ⑧ Connecting Palo Alto
- ⑨ Rengstorff Grade Separation
- ⑩ Mountain View Transit Center and Grade Separation
- ⑪ Bernardo Avenue Undercrossing
- ⑫ Mary Avenue Grade Separation
- ⑬ Sunnyvale Avenue Grade Separation
- ⑭ Diridon Area Projects
- ⑮ Southern San Jose Grade Separation Project





Caltrain Corridor Active Projects Preliminary Funding Gap

| (\$ in millions)* | San Mateo County | Santa Clara County | San Francisco | Total |
|----------------------------------------------------------|------------------|--------------------|-------------------------------------------|---------|
| Caltrain Corridor Active Project Estimated Cost (\$2022) | \$1,900 | \$1,300 | TBD (sole project is at concept phase) | \$3,200 |
| Estimated Committed Funding (All Sources) | \$300 | \$800 | | \$1,100 |
| Estimated Funding Gap | \$1,600 | \$500 | | \$2,100 |

**Table inclusive of projects on the Caltrain-owned corridor, exclusive of Diridon Area*