



Corridor Crossings

STRATEGY





AGENDA

- **Program Refresher**
- **Project Progress**
- **Delivery Guide**
- **November Workshop Recap**



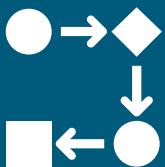
Purpose

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

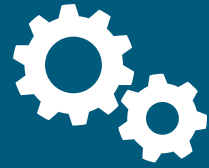
The strategy aims to **align stakeholder ambitions into balance with an implementable program**, addressing:

- Funding
- Organization
- Program Delivery

Note: Active grade separation projects will continue in parallel



Paths



Project Delivery Opportunities

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

Outcome: Crossings Delivery Guide



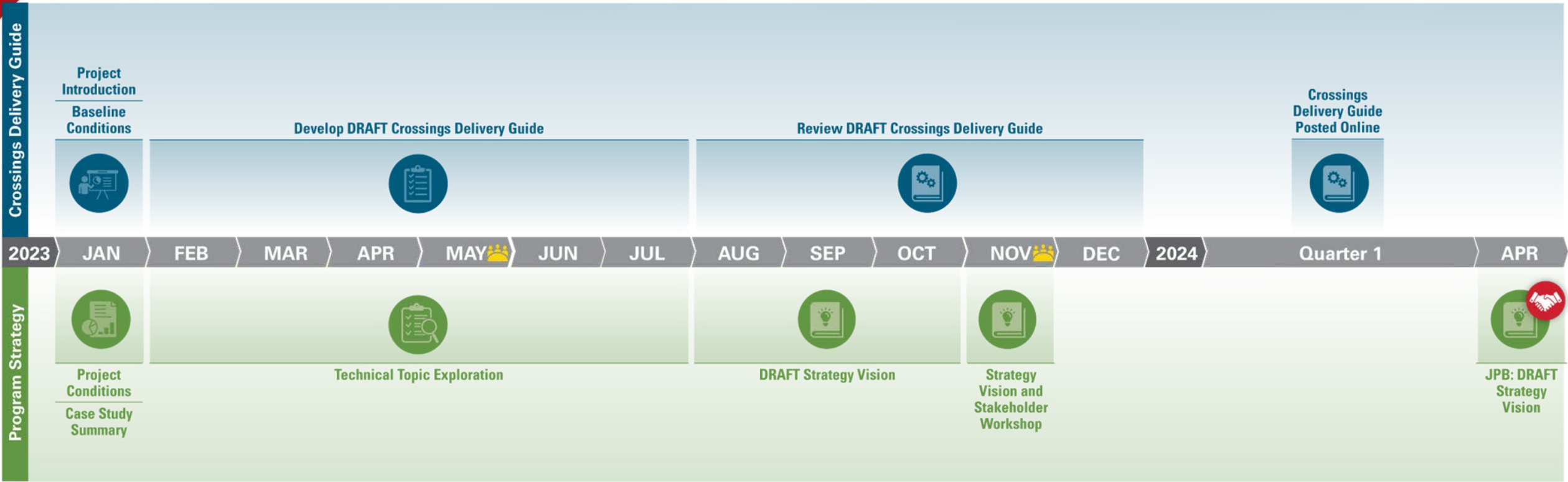
Program Strategy Development

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

Timeline



In Person Meeting

Recap of March CAC Presentation

- Illustrated shared strategy development



- Reviewed Case Studies
- Outlined Technical Exploration Topics
- Presented on Program Strategy Goals



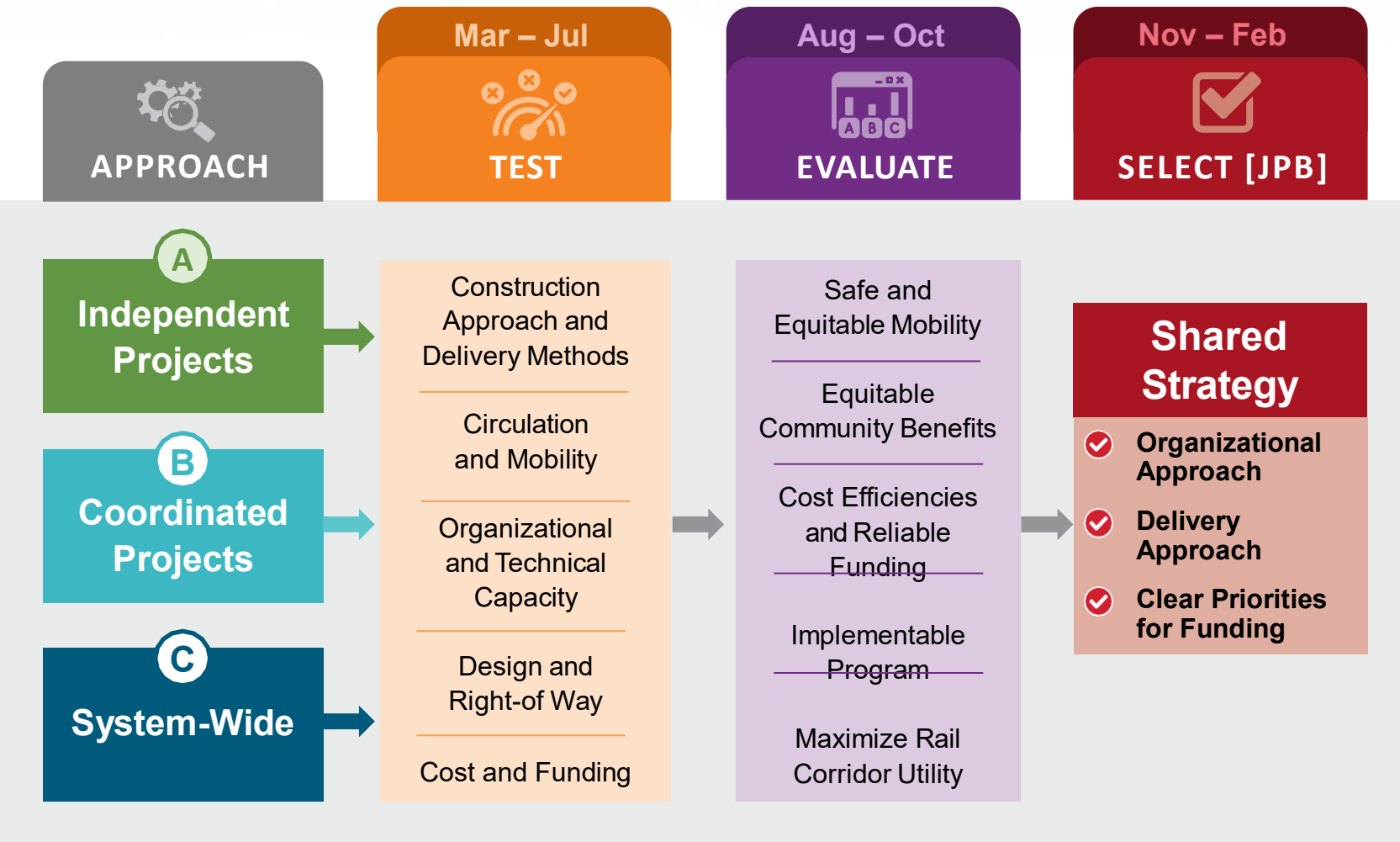
Project Progress



Corridor Crossings
STRATEGY



Program Strategy Process

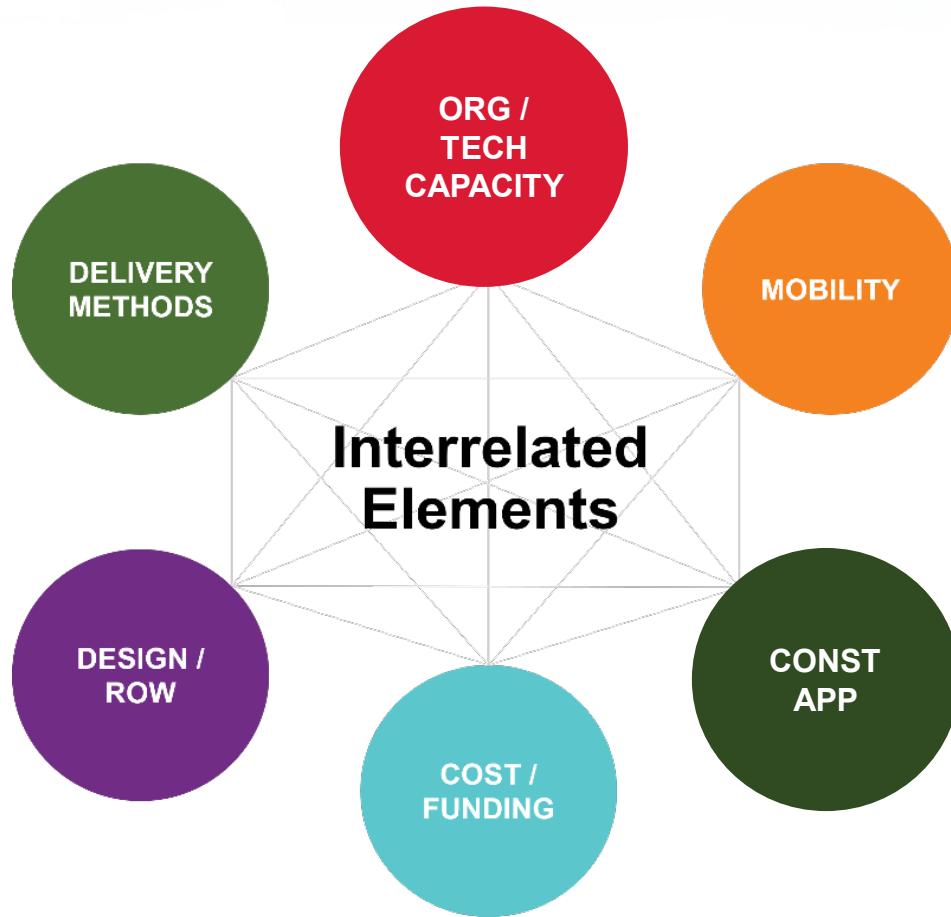




Recap of Technical Topic Exploration

TEST

EVALUATE



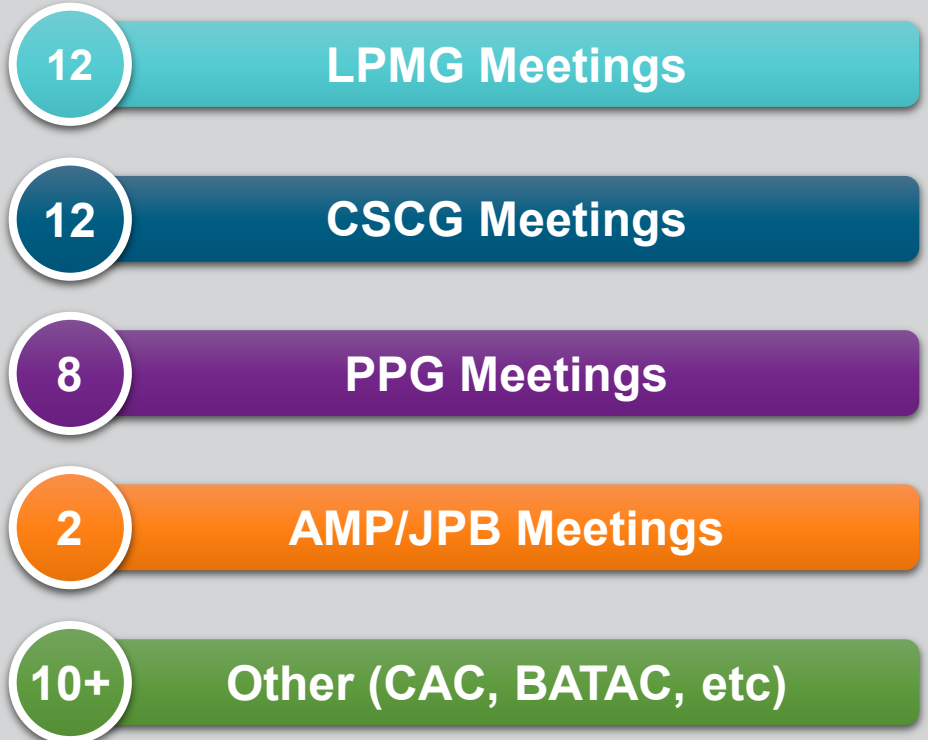
- Technical topic conclusions supported a coordinated program approach and the need to identify priority projects
- Key conclusions of the **technical topics** include:
 - **ORG / TECH CAPACITY:** Caltrain staff resources and capacity are constrained and additional resources would be needed to support deeper involvement in a grade separation program
 - **MOBILITY:** There is not corridor-wide consensus on a fully separated corridor; corridor communities want to focus on delivering priority projects
 - **CONSTRUCTION, DESIGN / ROW:** Consolidating crossing projects realizes numerous construction and delivery benefits, as well as potential efficiencies from coordinating project implementation
 - **COST / FUNDING:** Identifying priority projects helps region to identify complete funding for high-impact projects as quickly as possible



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...



Delivery Guide Update



KEEP RIGHT
→
Only Use
Pedestrian
Crossing To
Cross Tracks



Corridor Crossings
STRATEGY



From Numerous Meetings, Partners Desire...

A consolidated and coordinated program to accelerate the delivery of grade separation projects and to strategically pursue funding

That Caltrain take a proactive and consistent role in delivering grade separation projects

A consistent and transparent grade separation process

A continued role for cities and a need for a grade separation program to reflect community vision



DRAFT Crossings Delivery Guide

- Graphically engaging, easy to read guidance
- Design standards + project development and delivery

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 additional clearance requirements due to the presence of the OCS equipment and system. See Chapter 7 for the specific clearance requirements.
- 2 Retaining walls provide structural support to the facility.

OCS SYSTEM

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

FENCING

Protective Bridge Fencing: A 10-foot tall protective solid barrier is required to ensure the safety of both the trains and the public. The barrier is intended to prevent pedestrians and bicyclists from touching or throwing items to the tracks.

Underpasses generally have fencing to separate public and private property, as well as to prevent intrusion into the Caltrain ROW.

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 rails, as well as fencing to separate stations from adjacent streets.

PEDESTRIAN AND BIKE ACCESS

- 7 Sidewalk and universal access ramps to this tunnel are required in order to provide access for all ages and abilities. Bike grooves can be provided on crossings to allow cyclists an easy method to transport their bicycle through the facility.
- 8 Bike lockers offer a more secure form of bicycle storage at crossing facilities, especially ones with stations nearby.
- 9 Plaza areas around crossing entrances can activate the area and provide an inviting place for the community. Environment should be well lit and well maintained.
- 10 Convex mirrors and CCTV cameras can contribute to better visibility areas that are covered. Maintaining secure level of visibility in an underpass facility is critical to user comfort.

LIGHTING

- Pedestrian-scale lighting should be implemented throughout the facility and its associated entrance and exit areas. Good visibility improves safety of the crossing and the sense of security of its users. Lighting is especially important for facilities that are not directly connected to stations, larger roadways, and other infrastructure.
- 11 Skylights can be used in underpass facilities to provide more natural light in the tunnel, leading to a more secure feeling facility.

ROADWAY FOOTPRINT

- 12 Wayfinding signs help users orient themselves spatially along the Caltrain corridor and can help them understand where the crossing ends on the other side of the tracks.
- 13 Transit integration, like this straight-cut bus stop and drop-off zone, help facilitate connections to the rail crossings. Care of connector to local bus and train routes is a key consideration for any bicycle and pedestrian facility.

DRAINAGE

- Implementation of permeable facilities and greenery relieves some pressure from the facility drainage system and makes the facility more attractive.
- Drainage systems are required to manage rainwater within facilities. In underpass facilities, pumping water from the facility typically requires an identified pump station due to the lower elevation.

4 Funding and Grant Programs

This section discusses the importance of developing a detailed funding plan and provides an overview of the available funding sources for grade separation projects. Grade Separation projects can be expensive and may require the project sponsor to secure grants from multiple sources. Grade-separations have been recognized as a priority in California and there are several available funding programs for local agencies to support these types of projects. That said, while Caltrain can serve as a partner in obtaining funding, they are unable to help fund grade-separations specifically. The charter between SFMTA, SMCTA, and VIA, which serves as the basis for Caltrain operations, explicitly states that Caltrain funds may only be used for operations, which would not include grade-separations.

Funding Plan

A detailed funding plan that aligns with an accurate and conservative cost estimate is crucial for advancing grade separation projects. The funding plan and project cost estimates should be developed as early as a project's initiation phase. Those funding commitments should be updated semiannually or yearly corresponding to the local jurisdiction's fiscal year. Cost estimates should also be updated regularly as the project progresses through phases of development and to represent current market conditions. Caltrain recommends that local entities frequently update the project costs. Soft costs should also be considered including Caltrain's management of the grade separation project. Soft costs also should include contingency which should vary depending on the phase of the project. As the project advances and there are fewer risks and unknowns, the contingency may be reduced. Refer to [Table XX](#) for Caltrain's contingency guidance for capital improvement projects. More details on project cost and funding for each phase can be seen in [Figure XX](#). Complete funding for a project phase should be secured before a phase begins to facilitate projects advancing through phases in an efficient manner.

Project Sponsor

Local agencies are the project sponsors responsible for preparing and executing a funding plan to support all phases of a grade separation project in the Caltrain corridor. While Caltrain staff's expertise is necessary to support grade separation projects, using Caltrain funds to advance local jurisdiction projects is not allowed. Caltrain can only use public funds towards delivering cost-efficient rail services under the current regulation, which requires dedicating all Caltrain funding toward the management, operation, and maintenance of the commuter rail service.

Key Chapter Takeaways:

- Grade-separations recognized as a priority in California—Several funding programs available for local agencies
- Caltrain cannot direct funds toward grade-separation projects but can serve as a partner in obtaining funds
- Funding sources: Federal, Statewide, County, Local, and Private
- Minimizing project delays with detailed funding plan that correlates with a frequently updated project cost
- Local agency responsible for preparing, identifying, and executing funding requirements set by the grant program and communicate the requirements with Caltrain staff early in the process.

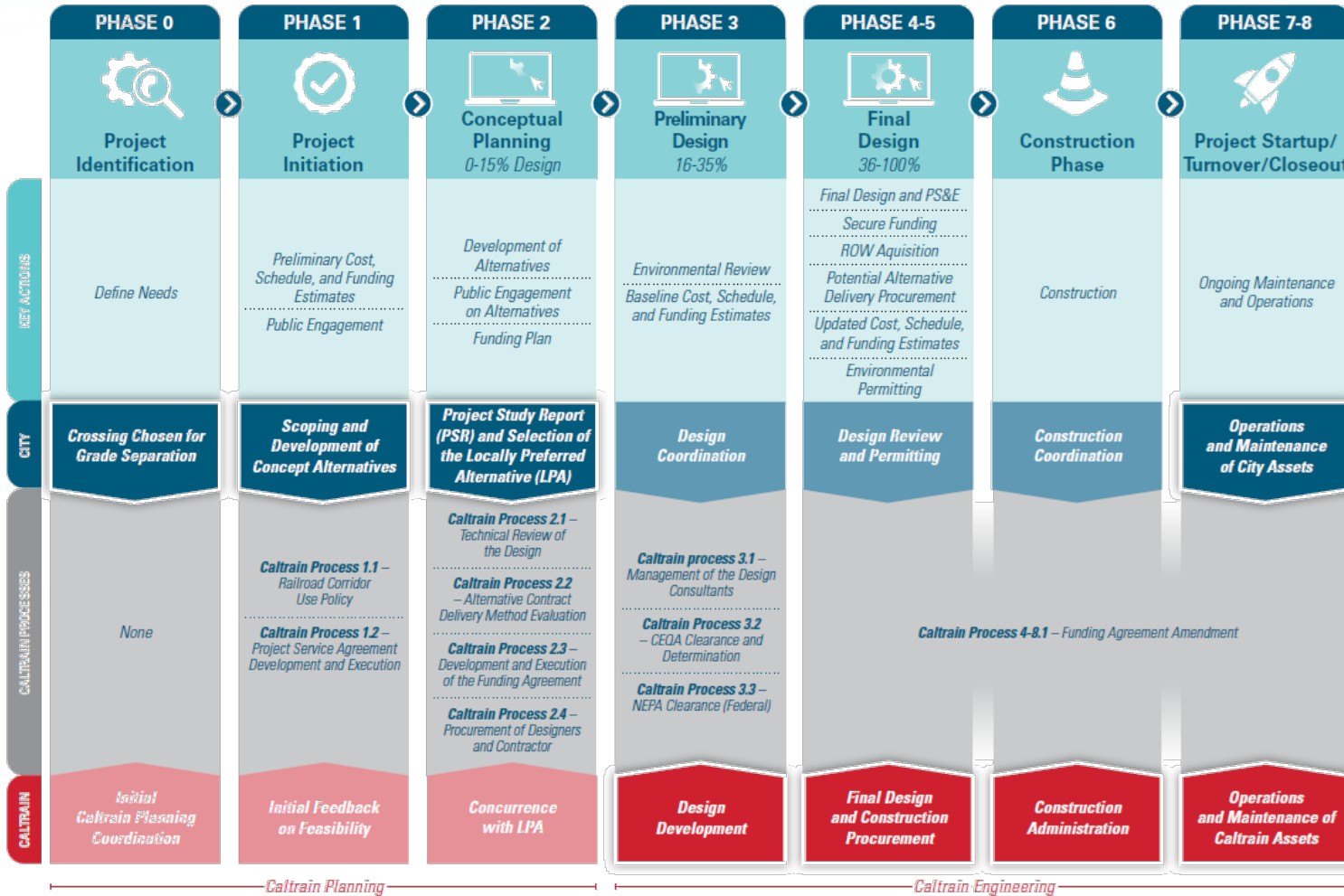
17 | Corridor Crossings Delivery Guide Manual



DRAFT Crossings Delivery Guide – Outline and Structure

Background	Project Initiation
<ul style="list-style-type: none">• Corridor Overview• Regulatory Environment• At-Grade Rail Crossings	<ul style="list-style-type: none">• Project Implementation Process• Planning a Grade Separation• Funding and Grant Programs
Grade Separations	Project Delivery and Implementation
<ul style="list-style-type: none">• Key Considerations and Caltrain Design Criteria<ul style="list-style-type: none">○ <i>Governing Design Standards</i>○ <i>Vertical Clearances for Overpasses</i>○ <i>Vertical Clearances for Underpasses</i>○ <i>Profile Grade</i>○ <i>Horizontal Clearances</i>○ <i>Structural Design</i>○ <i>Design Variances</i>○ <i>Operational Impacts</i>○ <i>Grade Separation Components</i>• Grade Separation Types	<ul style="list-style-type: none">• Delivery Methods• Construction methods

DRAFT Crossings Delivery Guide – Process Overviews



City Lead Caltrain Lead Internal Caltrain Phase Gates

*White outline indicates whether City or Caltrain is leading that phase

Project Phases and Tasks	City/Local Jurisdiction	Funding Agency	Caltrain	County
PHASE 3: 16-35% PRELIMINARY DESIGN				
3.1: Develop Project Management Plan (PMP)	C	C	LEAD RA	I
3.2: Submit Complete Streets Checklist (for VTA 2016 Measure B funds only)	RA	C	C	I
3.3: Update the funding plan	RA	C	R	I
3.4: Advance design to 35% development	C	C	RA	C
3.5: Evaluate alternate Project Delivery Approaches (DBB, CM/GC, PDB) and make findings in a public meeting (JPB Board)	C	C	RA	I
3.6: Formation of a Technical Working Group (TWG)	C	C	RA	C
3.7: Develop Preliminary Public Art Plan	RA	C	C	I
3.8: Attend and present to City Councils as needed	RA	C	RA	I
3.9: Lead ongoing community outreach	RA	C	R	I
3.10: Lead the Environmental Clearances (CEQA, NEPA as required)	C	C	RA	I
3.11: Risk Assessment	C	C	RA	I
3.12: Update Project Cost /Budget	C	C	RA	I
3.13: Amend Cooperative Agreement / MOU for Final Design (if applicable)	RA	RA	RA	I
3.14: Issue RFP or Exercise Option for Final Design	C	C	RA	I
3.15: Review the bid	RA	RA	RA	I
3.16: Select consultant and issue Notice to Proceed (NTP) for Final Design	RA	RA	RA	I
3.17: Environmental Documentation	C	C	RA	I
3.18: Update Funding Plan	RA	C	RA	I
3.19: 35% Phase Gate Management Committee	C	C	RA	I
3.20: Prepare Staff Report and Board Resolution for JPB Board for Funding Agreement to advance the design to 100%	C	C	RA	I
3.21: Evaluate and Execute Alternate Project Delivery Pre-Construction Services Contract, or PDB, if applicable	C	C	RA	I

November Workshop Recap





From Numerous Meetings, Partners Desire...

A consolidated and coordinated program to accelerate the delivery of grade separation projects and to strategically pursue funding

That Caltrain take a proactive and consistent role in delivering grade separation projects

A consistent and transparent grade separation process

A continued role for cities and a need for a grade separation program to reflect community vision



**NOVEMBER
WORKSHOPS**



Workshop Overview

City/County Staff Coordinating Group (CSCG) and CCS Project Partner Group (PPG) Workshop

- November 15 in Mountain View
- 19 total attendees
- As part of breakout activity, attendees were asked to discuss in detail how a coordinated program approach to corridor crossings could be implemented
- Attendees assigned corridor entities to various tasks associated with an approach
- Attendees ultimately settled on the idea of a “Corridor Crossings Investment Program”



Local Policy Maker Group (LPMG) and Public Workshop

- November 30 in Mountain View
- 18 total attendees
- As part of breakout activity, attendees were asked to assign entities to a “develop, endorse, adopt” model for the Corridor Crossings Investment Program
- Attendees were also asked to define the cyclical process of the Program



November Workshop

- Agreement on the Corridor-wide Need
- Discussed Program Development
- Defined Components of Investment Program
- Discussed the Importance of Clear Roles and Responsibilities of an Integrated Program



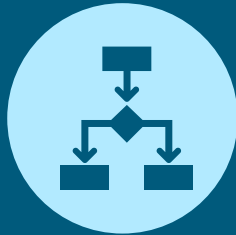


November Workshop Feedback

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**

Next Steps



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

