



Corridor Crossings

STRATEGY



Local Policy Maker Group
10.26.2023





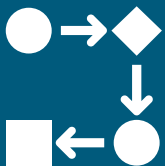
Purpose

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

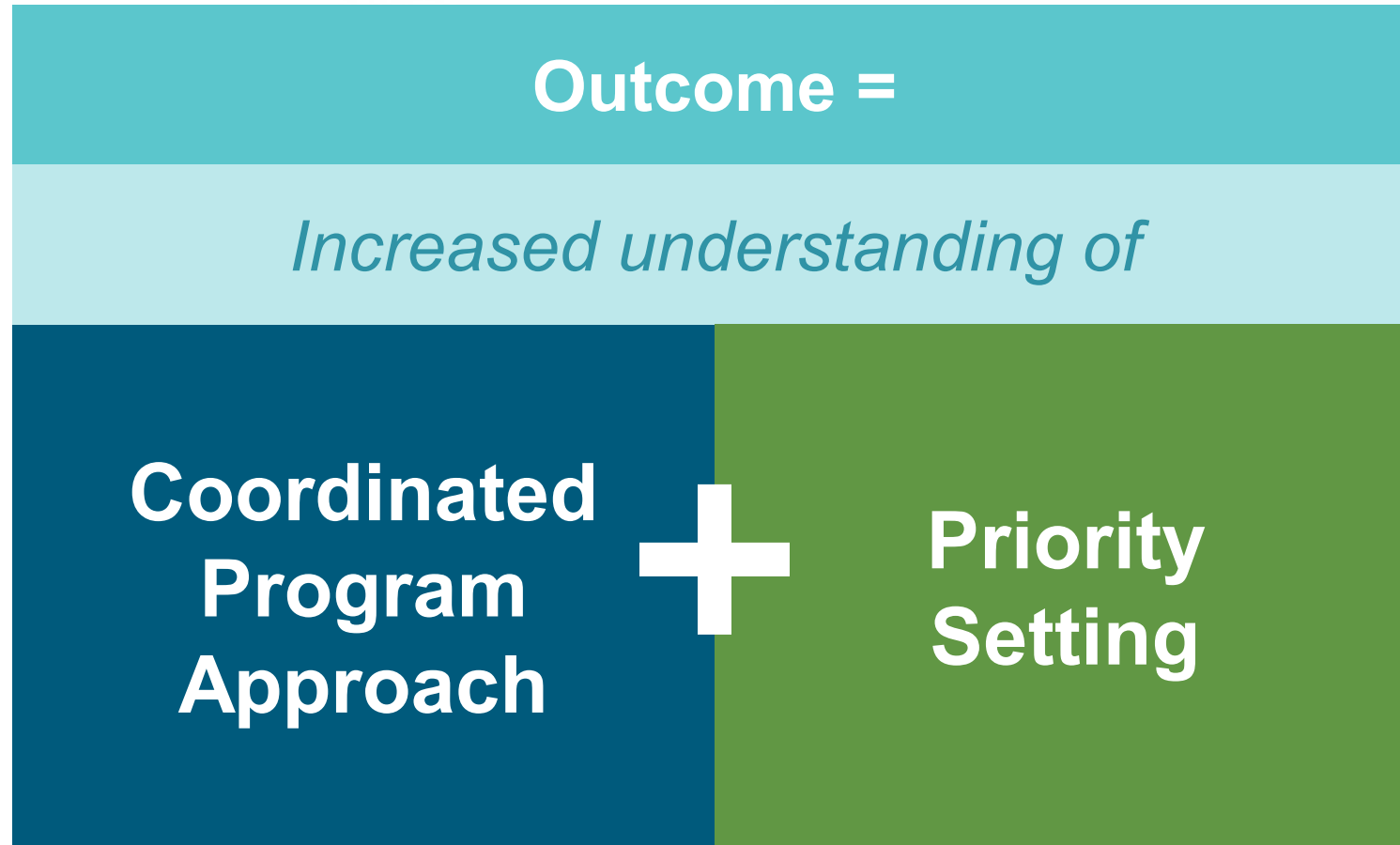
The strategy aims to **align stakeholder ambitions into balance with an implementable program**, addressing:

- Funding
- Organization
- Program Delivery

Note: Active grade separation projects will continue in parallel



Setting the Stage for a Corridor-Wide Strategy

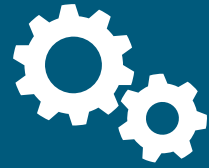




AGENDA

- **Project** Progress
- **Feedback** Overview
- **Building** the Program
- **Next** Steps

Paths



Project Delivery Opportunities

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

Outcome: Crossings Delivery Guide



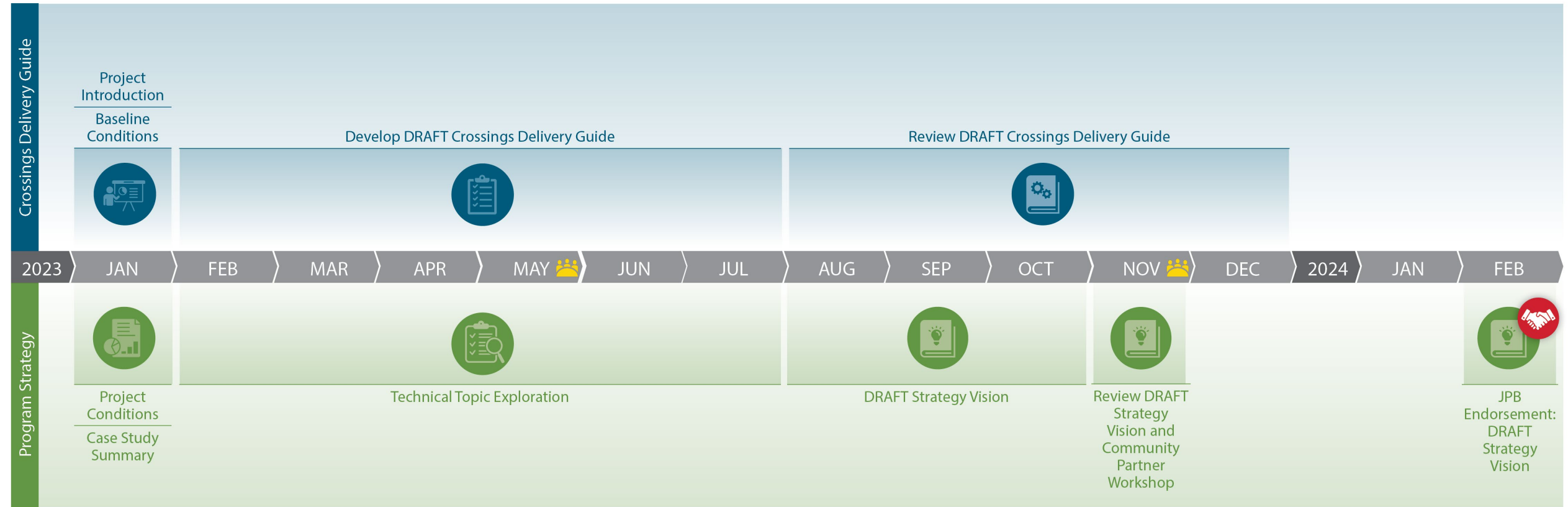
Program Strategy Development

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

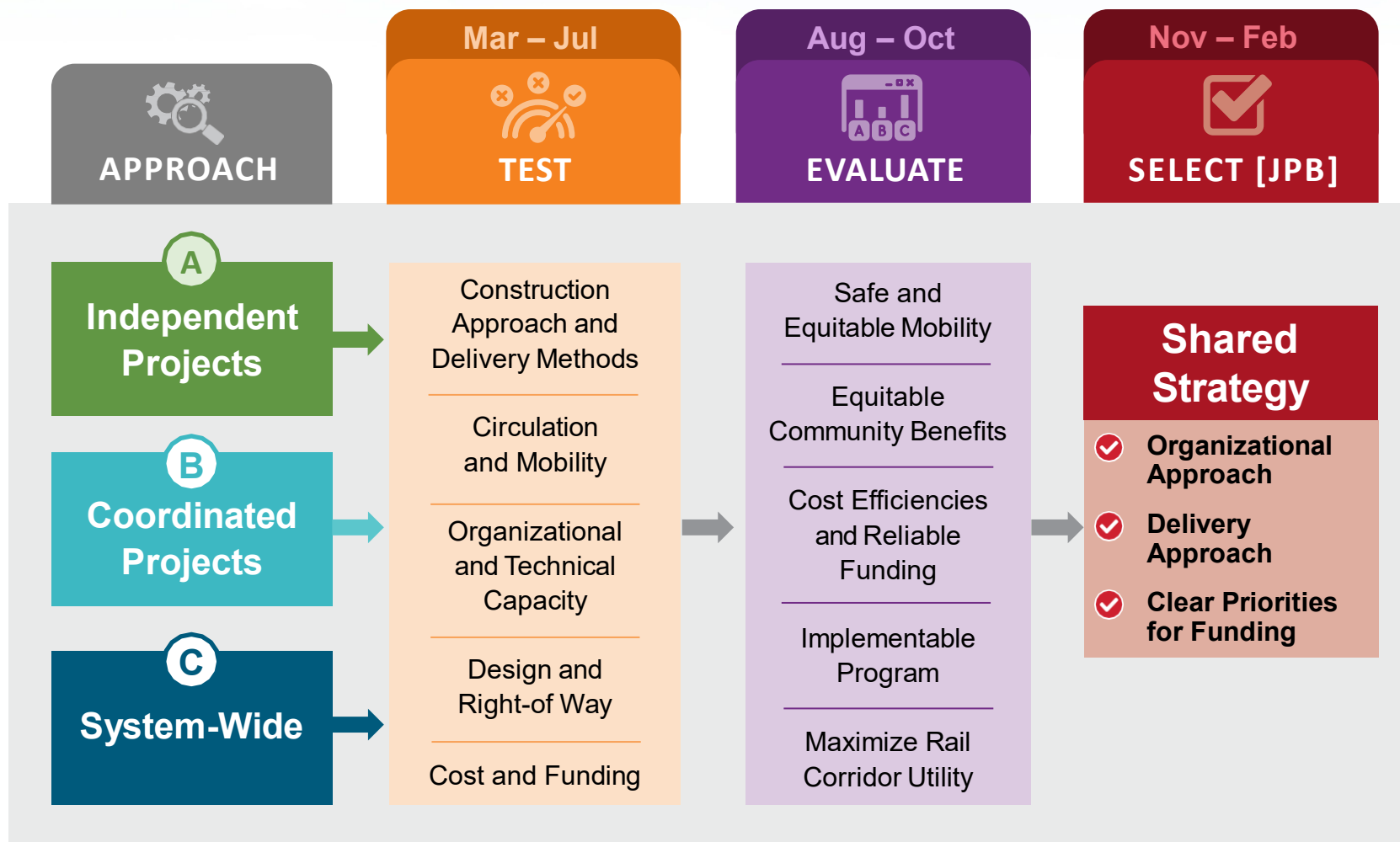
Project Progress



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Program Strategy Process





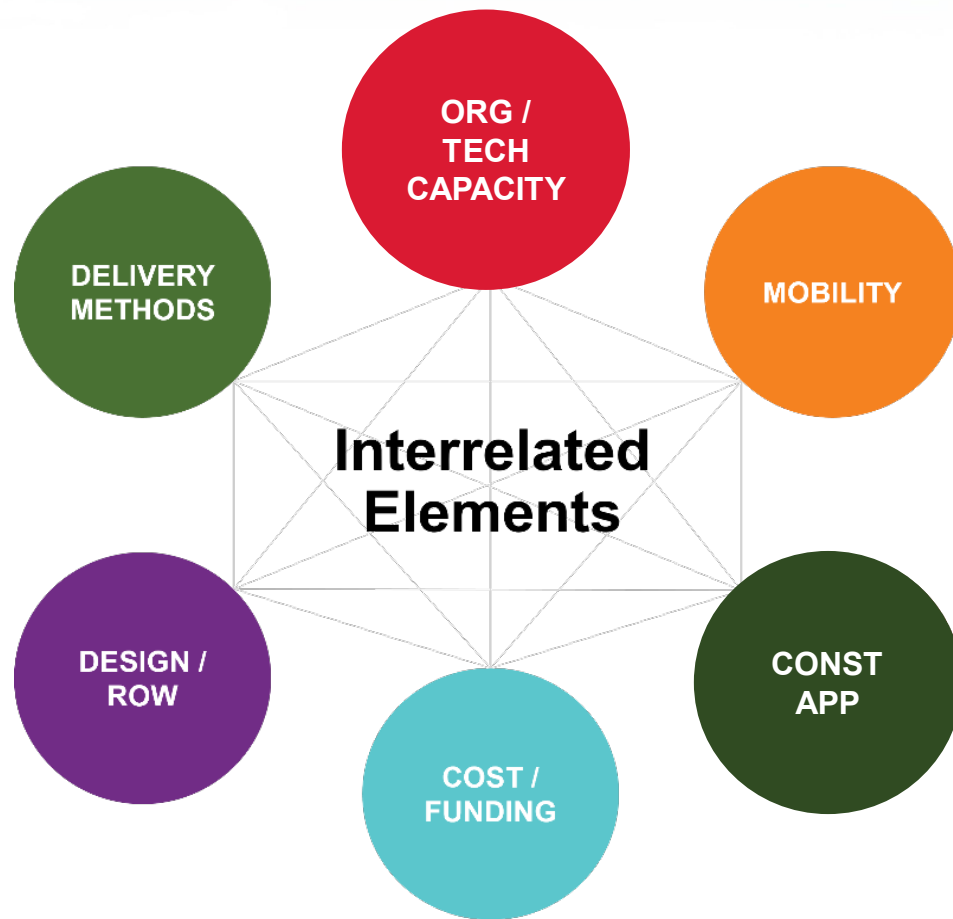
Recap of Technical Topic Exploration



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

Feedback Overview

What We Have Heard so Far



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May Workshop Recap



Common Takeaways:

- ✦ Benefits of a corridor-wide approach with sensitivity to local conditions
- ✦ Complexity and volume of issues, information, and data to inform a corridor-wide approach

Breakout Exercise:

Participants collaborated on determining crossing treatments for at-grade crossings

- ✓ *Considerations and takeaways of crossing treatments*
- ✓ *Benefits and challenges of program delivery approaches*

CSCG/PPG Workshop

26



17



LPMG Workshop

24



15

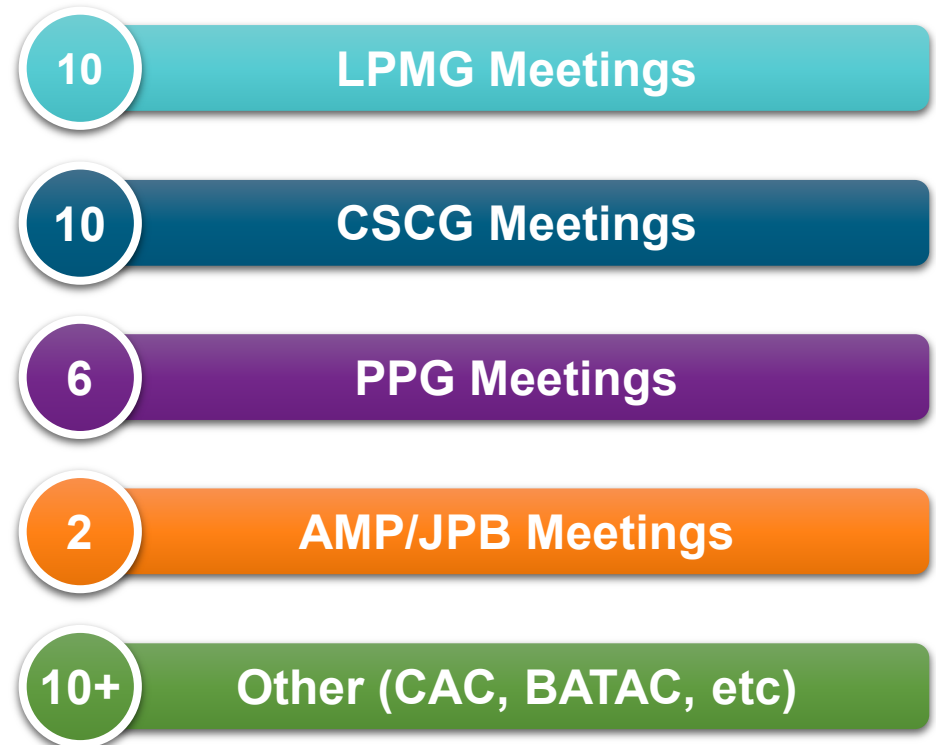




From Numerous Meetings, Partners Desire...

- 📢 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

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





Approach Spectrum

Approach A: Independent Projects

- Project-by-project approach/management
- Local funding plan
- Aspirational goal, but no timeline
- Current approach for Caltrain

Approach B: Coordinated Projects

- Regionally coordinated approach to corridor funding
- Interjurisdictional communication about resources and schedule
- Coordinated corridor project delivery
- Aspirational goal with timeline

Approach C: System-Wide

- Transparent and consistent methodology
- Robust and centralized project delivery
- Corridor-wide and regional funding
- Consistent project champion
- Aggressive goal with timeline

Building the Program

*How We are Incorporating
Community Partner Feedback*



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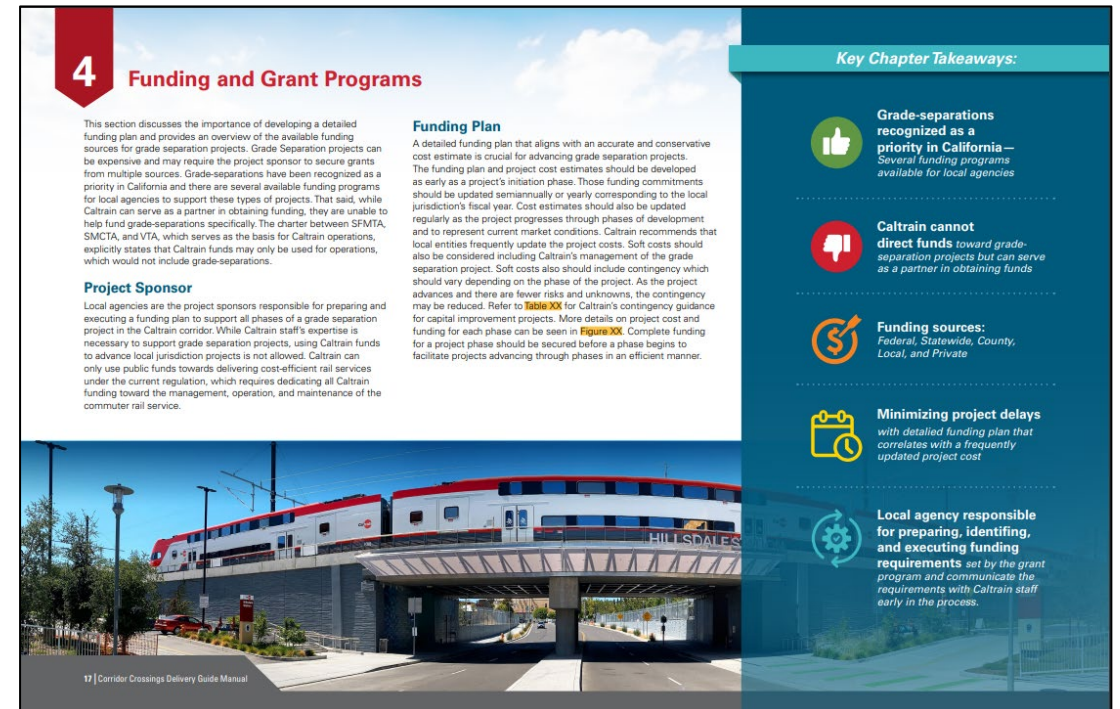
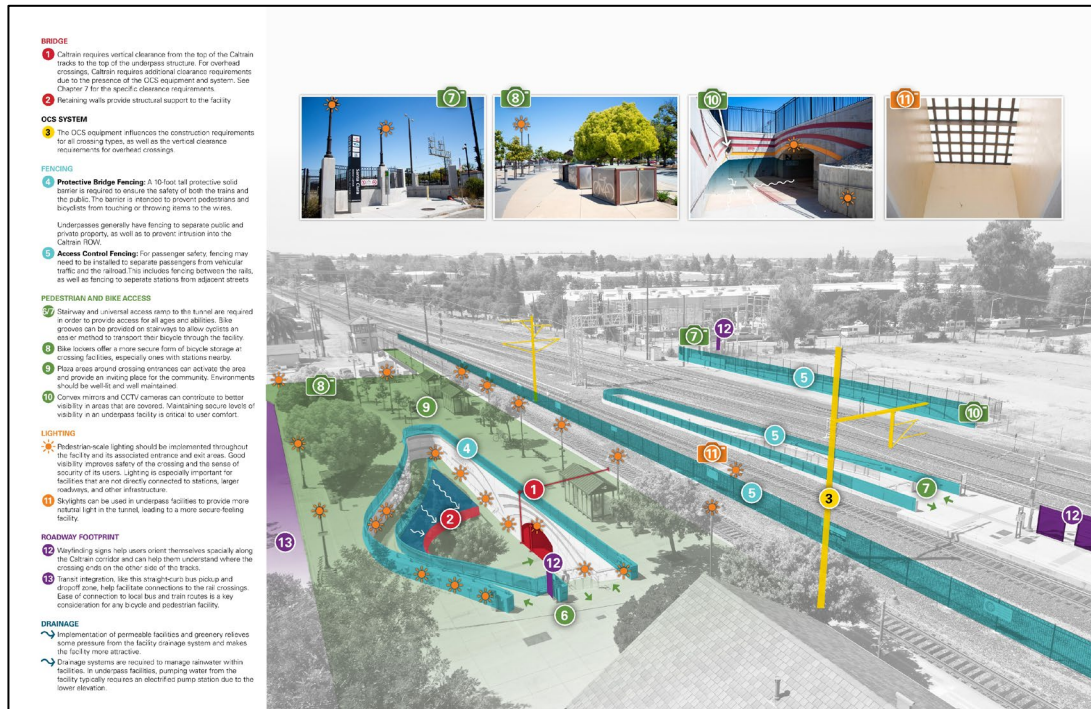
A consistent and transparent grade separation process

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

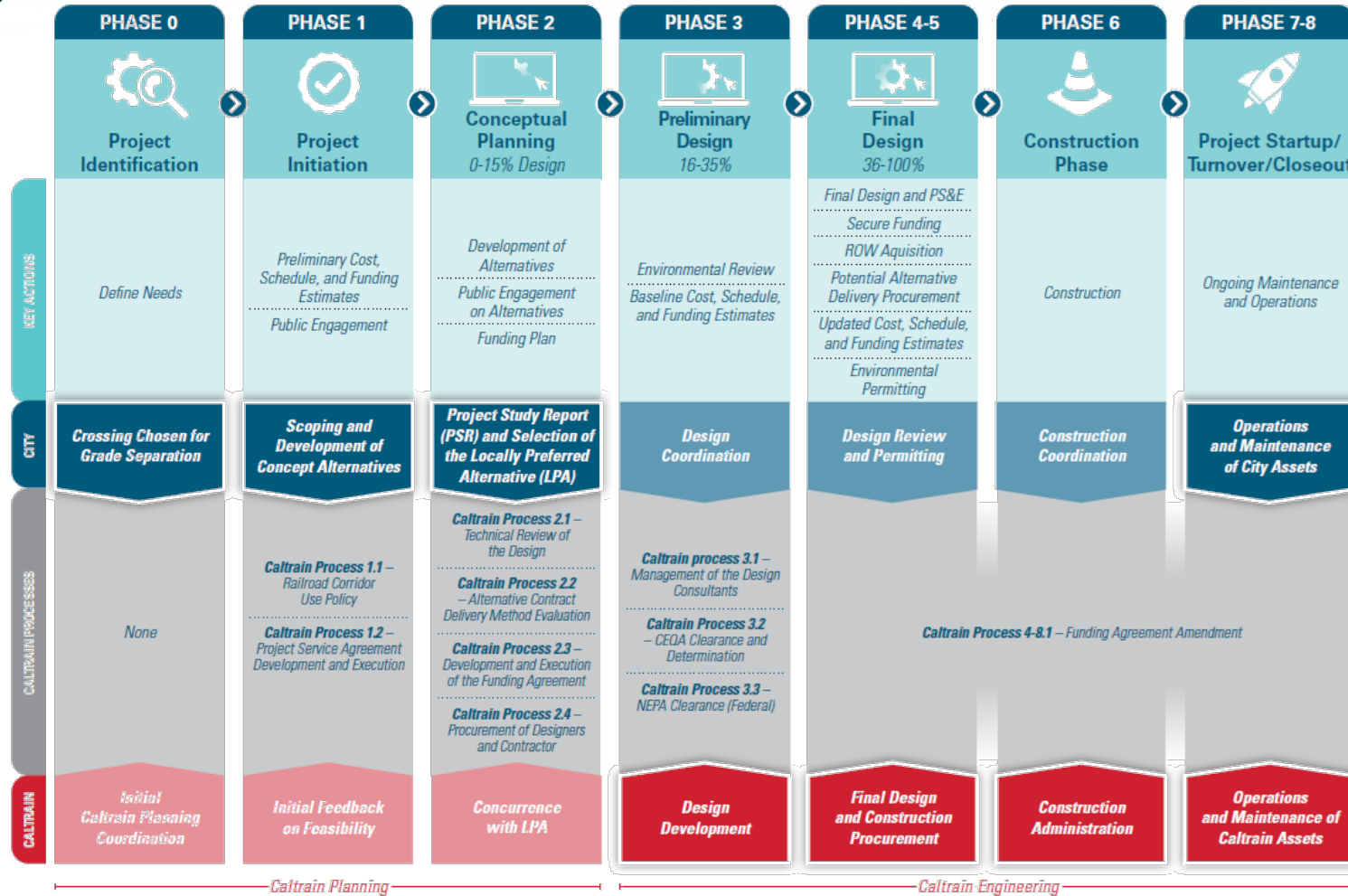




DRAFT Crossings Delivery Guide – Outline and Structure

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



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



DRAFT Crossings Delivery Guide: Next Steps

1. Internal review draft + revisions in process now
2. Review draft to corridor partners (December)
3. Receive comments and final revisions
4. 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 provided 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 into undercrossings should be well-lit and maintained.

10 Convex mirrors and CCTV cameras can contribute to safety and an improved sense of security.

LIGHTING

11 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.

12 Skylights can be used in an underpass to provide more natural light in the tunnel, leading to a more secure-feeling facility.

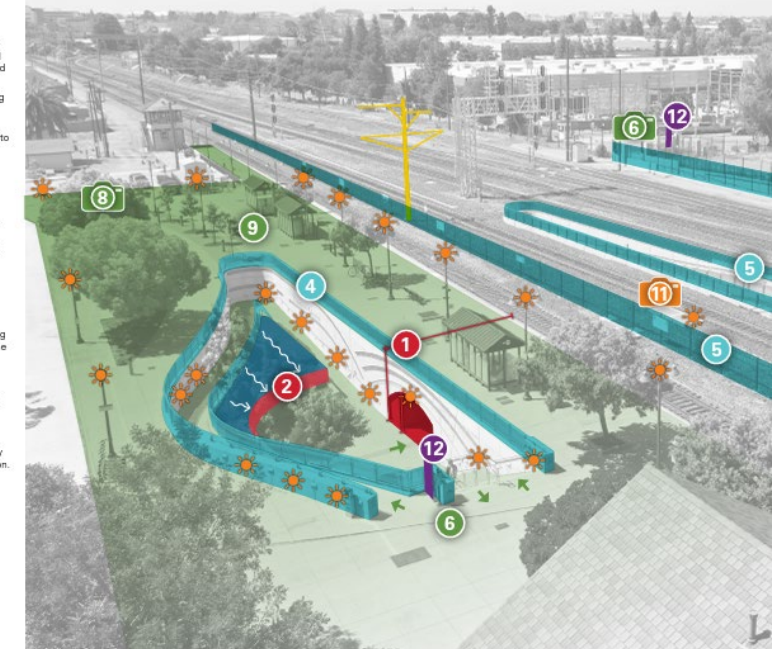
ACCESS

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

Implementation of permeable facilities and greenery assists the drainage system and makes the undercrossing facility more attractive.

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.





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**COORDINATED
PROGRAM APPROACH**



Coordinated Program Approach

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 ***

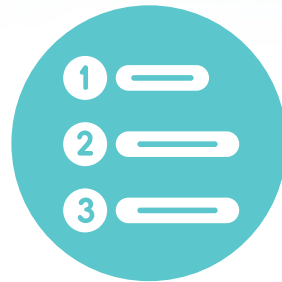
*** Cannot currently be accommodated with existing staff resources ***



Why Identify Priority Projects?



**Focus Limited
Funding Efforts**



**Identify Partner
Priorities on Corridor**



**Assist Overall
Project Implementation**



Evaluate which **crossings and projects** are anticipated to have the **greatest positive impact on the corridor**.

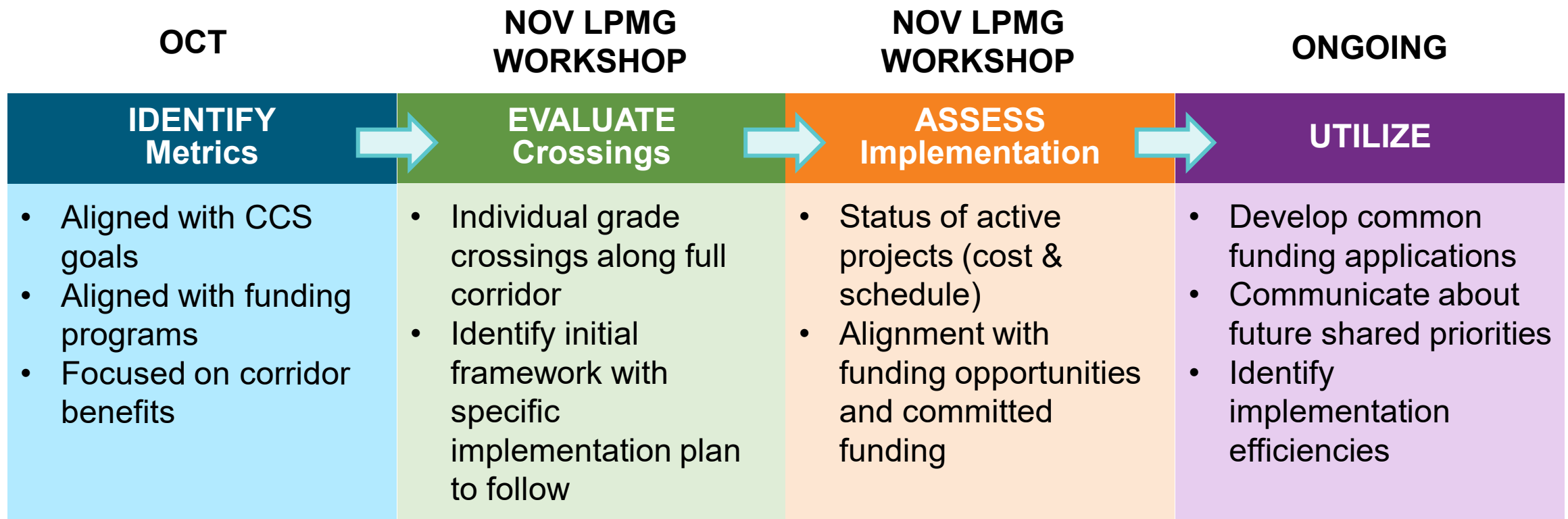
Identify corridor consensus on **funding priorities** to close project funding gaps.

Collaboratively identify **future grade crossing projects** and what a **Corridor Crossing Program** might look like (in time/funding/capacity needs)



Process for Identifying Priority Projects

The Corridor Crossings Strategy is an effort to **define a systematic corridor-wide approach** to crossings.



Note: Active grade separation projects will continue in parallel

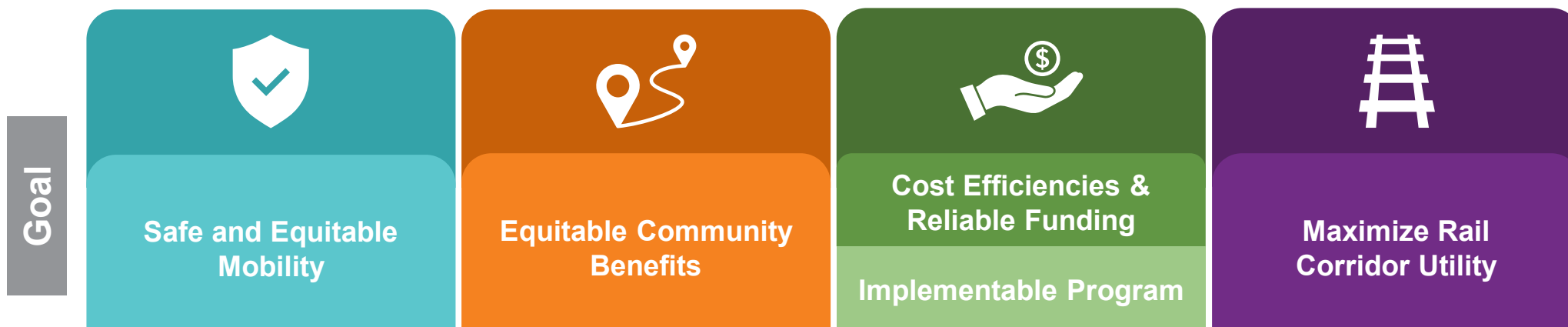




Which Crossings Have Greatest Positive Impact?

IDENTIFY Metrics




- CCS goals are aligned with state and federal funding criteria
- Evaluate against criteria rather than against other crossings
- Data sources that are simple to obtain and update





Proposed Metrics

IDENTIFY Metrics

Goal	 Safe and Equitable Mobility	 Equitable Community Benefits	 Cost Efficiencies & Reliable Funding Implementable Program	 Maximize Rail Corridor Utility
	Factor <ul style="list-style-type: none">• Recent Fatal Rail Incident and/or Fatal or Severe Crash• Existing Bike and Pedestrian Access• Gate Downtime Growth Over 75%	<ul style="list-style-type: none">• Within 0.5 Miles of a School• Within Equity Priority Community	<ul style="list-style-type: none">• Within 0.25 Miles of Another Crossing	<ul style="list-style-type: none">• Within Future 4-Track Area



Which Crossings Have Greatest Positive Impact?

EVALUATE
Crossings

- Evaluate *all* crossings in full Caltrain corridor on shared goals
- Understand project readiness





Caltrain Corridor Active Projects Preliminary Funding Gap

**ASSESS
Implementation**

(\$ 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 DISC*





AASHTO Council on Rail Transportation Report Out

UTILIZE

FRA Railroad Crossing Elimination (RCE) Program

FY 2022 RCE Program Selections

FRA received 153 eligible applications, requesting **\$2,357,111,098** from 41 States.
FRA announced **\$570,982,420** for 63 projects in 32 states.

All applications go through several layers of review, including:

- Intake and eligibility
- Technical review
- Senior Review Team
- FRA Administrator/Secretary

FY 2023 RCE Notice of Funding Opportunity

FRA anticipates publishing the FY23 RCE Notice of Funding Opportunity later this fall, which will make approximately \$575 million available.

U.S. Department of Transportation
Federal Railroad Administration

Overall Takeaways

FRA Lessons Learned– What We've Heard from You

- Lifecycle stage clarity
 - New guidance
 - Risk of applying for multiple stages
- RCE-specific eligibility requirements
 - RCE is different from other FRA programs
- Multiple submissions
 - Communicate priority rankings
- Safety argument reigns supreme
- Format matters

Interested in Feedback from Applicants

- Feedback for us? How can we improve?





Steps to Address Funding Gap



Short-term opportunities for collaborative funding applications

- ✓ New Federal programs show immense promise
- ✓ State programs providing needed resources
- ✓ Need to account for administration of funds



Need to identify dedicated long-term funding source(s)

- ✓ Leveraging dedicated resources
- ✓ Supporting coordinated program delivery and efficiencies
- ✓ Scaled to regional benefits

Next Steps



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**NOVEMBER
WORKSHOPS**



November CSCG Workshop Agenda

Topic:

- ☞ Organization and Coordinated Program Approach

Logistics:

- 🕒 In-Person Meeting
 - *During regularly scheduled meeting date (11/15)*
 - *10:00 AM – 12:00 PM*

Location:

- 📍 Mountain View City Council Chambers





November LPMG Workshop Agenda

Topic:

- 👉 Identifying Priority Projects and Funding Strategy

Logistics:

- 🕒 LPMG In-Person Meeting
 - 11/30
 - 4:00 PM – 6:00 PM

Location:

- 📍 Mountain View City Council Chambers

