Caltrain Business Plan

AUGUST 2018

LPMG

August 23, 2018

Looking Forward to a 2040 Vision

What is the Caltrain Business Plan?

What Addresses the future potential of the railroad over the next 20-30 years. It will assess the benefits, impacts, and costs of different service visions, building the case for investment and a plan for implementation.

Why Allows the community and stakeholders to engage in developing a more certain, achievable, financially feasible future for the railroad based on local, regional, and statewide needs.

What Will the Business Plan Cover?

Technical Tracks

Service

- Number of trains
- Frequency of service
- Number of people riding the trains
- Infrastructure needs to support different service levels

Business Case

- Value from investments (past, present, and future)
- Infrastructure and operating costs
- Potential sources of revenue

Community Interface

- Benefits and impacts to surrounding communities
- Corridor management strategies and consensus building
- Equity considerations

Organization

- Organizational structure of Caltrain including governance and delivery approaches
- Funding mechanisms to support future service

Developing a Service Vision

Corridor History & Future

Corridor History and Future

Grounding the 2040 Service Vision

Service Planning Approach

200 Years on the Caltrain Corridor

Yesterday

1863
Passenger service begins on the corridor

1870
Southern Pacific Railroad purchases the corridor

1940s – 1970s
Passenger and freight traffic boom during WWII then begin steady decline

Today

1977
Ca[illegible] subsidized [illegible]ific [illegible]ice

1987
Caltrain and Joint Powers Board are formed

2004
Baby Bullet service is introduced

2022
Corridor electrification is completed

Tomorrow

2027 and Beyond
Caltrain and High-Speed Rail operate using Blended System

1860 1870 1880 1890 **1900** 1910 1920 1930 1940 **1950** 1960 1970 1980 1990 **2000** 2010 2020 2030 2040 **2050** 2060

Grounding the 2040 Service Vision

Corridor History and Future

Grounding the 2040 Service Vision

Service Planning Approach

What is the Service Vision?

An Achievable End State for the Corridor in 2040

Train Service
- Frequencies
- Stopping patterns
- Service types
- Number of trains

Infrastructure Needs
- Fleet
- Systems
- Infrastructure
- Support facilities

Costs
- Operating
- Maintenance
- Capital

Outcomes
- Ridership
- Mobility benefits
- Revenues

Where do We Start?

The Service Vision Exists within an Established Framework

Existing Policy Decisions

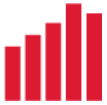
- Commitment to a Blended System
- Primarily a 2-track corridor

Planned Projects

- Stations
- Connecting services
- Grade separations

Community Acceptability

- Tangible benefits
- Mitigated or acceptable impacts



Market Responsiveness

- Origins and destinations
- Capacity
- Travel times
- Coverage

Fiscal Reality

- Realistic scale
- Value for money

Building Blocks for a 2040 Service Vision

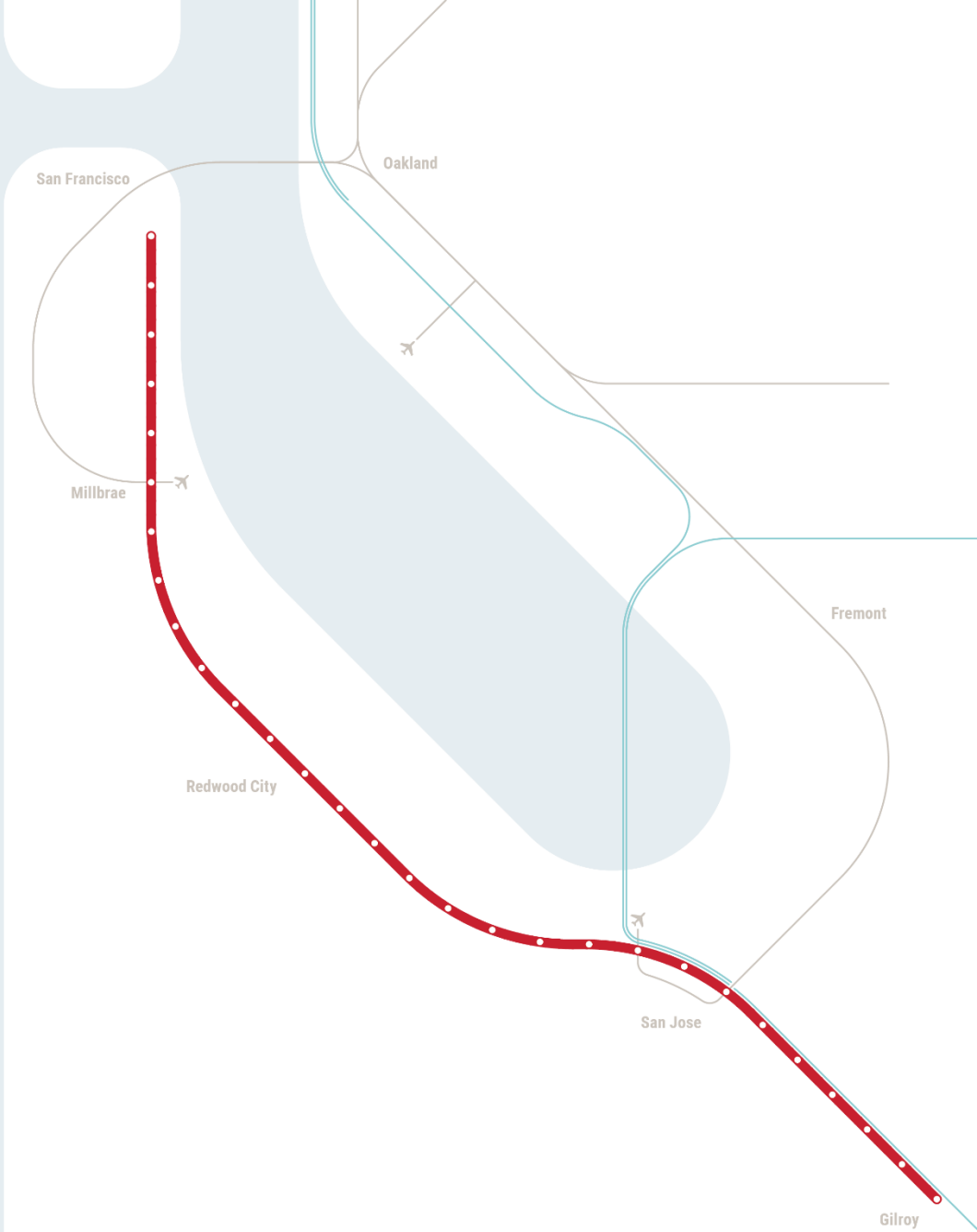
Caltrain

Assumptions

- Fully electrified service between San Francisco and Tamien
- Additional electrified service from San Jose to Gilroy on a 2-track electrified system

Explorations

- Details of service, fleet and infrastructure

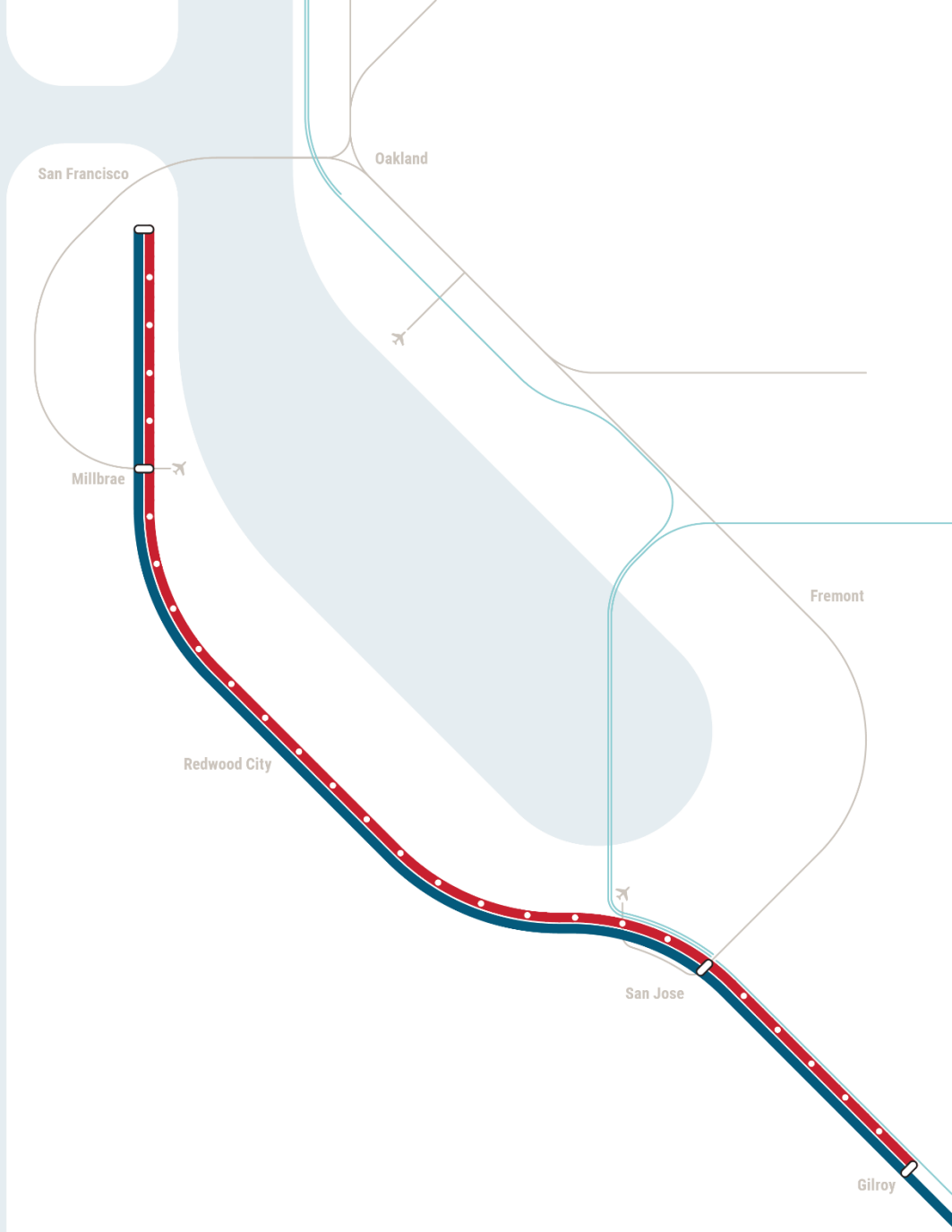


Building Blocks for a 2040 Service Vision

High Speed Rail

Assumptions

- Full HSR Service from Los Angeles to San Francisco (Phase 1)
- Related corridor and station upgrades consistent with a primarily 2-track Blended System (under study through HSR environmental)



Building Blocks for a 2040 Service Vision

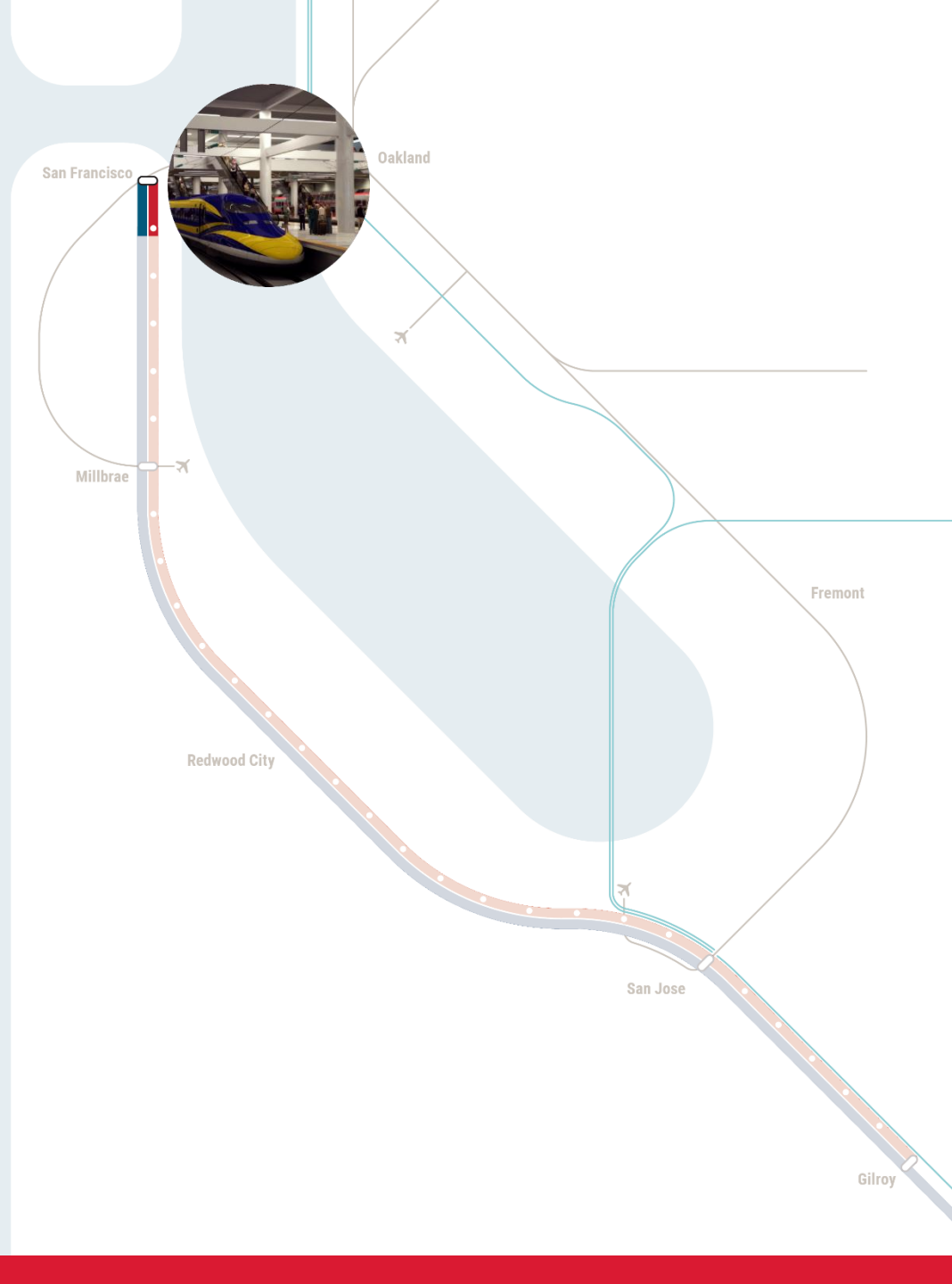
North Terminal

Assumptions

- Caltrain/HSR Downtown Extension to Salesforce Transit Center

Explorations

- 4th/King/Townsend reconfiguration
- Pennsylvania Ave alignment
- Potential reconfiguration or relocation of storage and maintenance facilities
- Potential interface with new transbay crossing

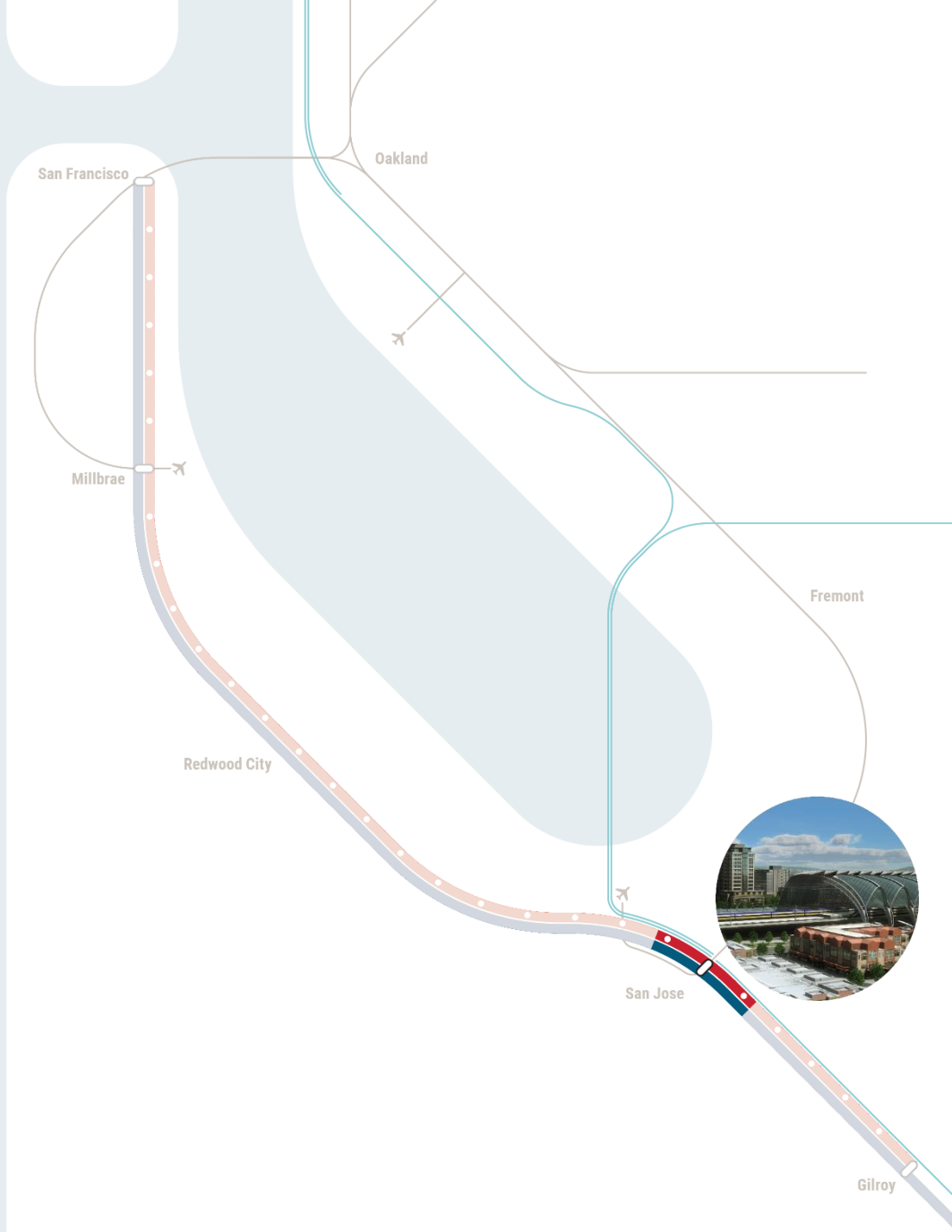


Building Blocks for a 2040 Service Vision

South Terminal

Explorations

- Reconstruction and reconfiguration of Diridon Station
- Additional potential modifications to surrounding rail facilities and potential relocation of CEMOF



Building Blocks for a 2040 Service Vision

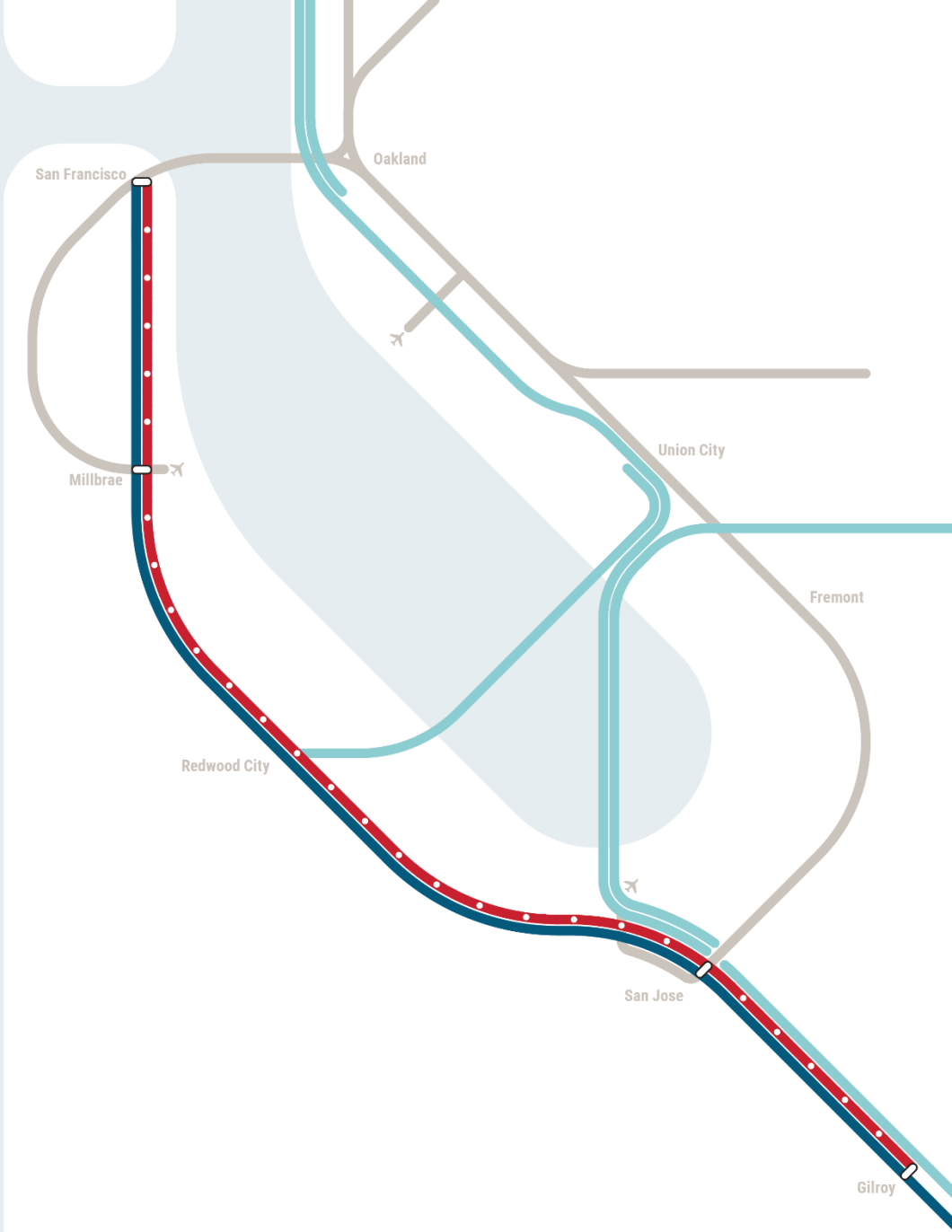
Connecting Services

Assumptions

- BART to Diridon and Santa Clara
- Expansion of ACE and Capitol Corridor service
- Continued use of corridor by freight

Explorations

- Dumbarton Rail Service
- Monterey County Rail Service



SHARING SESSION

Do the projects listed make sense as a starting point?

Are there other projects related to rail service that should be considered?

Service Planning Approach

Corridor History and Future

Grounding the 2040 Service Vision

Service Planning Approach

Key Concept

Planning within Constraints

The Caltrain corridor is not a blank slate. Over the past decade, the JPB and its partners have made major policy decisions that inform and bound how the railroad will grow and evolve in the future.

2008 CHSRA specifies its alignment

2011-2013 “Blended System” introduced

CHSRA Business Plan confirms Blended System

Senate Bills 1029 and 557 provide Prop 1A funds and codify 2-track blended system

2013-2017 Peninsula Corridor Electrification Program environmentally cleared

Receipt of Federal Full Funding Grant Agreement

Full Notice to Proceed issued

Key Concept

Planning within Constraints

The decisions and commitments that have already been made on the corridor bring three fundamental service planning questions into tension with one another:

1. Service Differentiation

How can local, regional and high speed services be blended and balanced on the corridor to best serve multiple markets?

2. Peak Service Volume

How much growth peak train traffic volume can the corridor support and what kinds of growth may be required to meet long term demand?

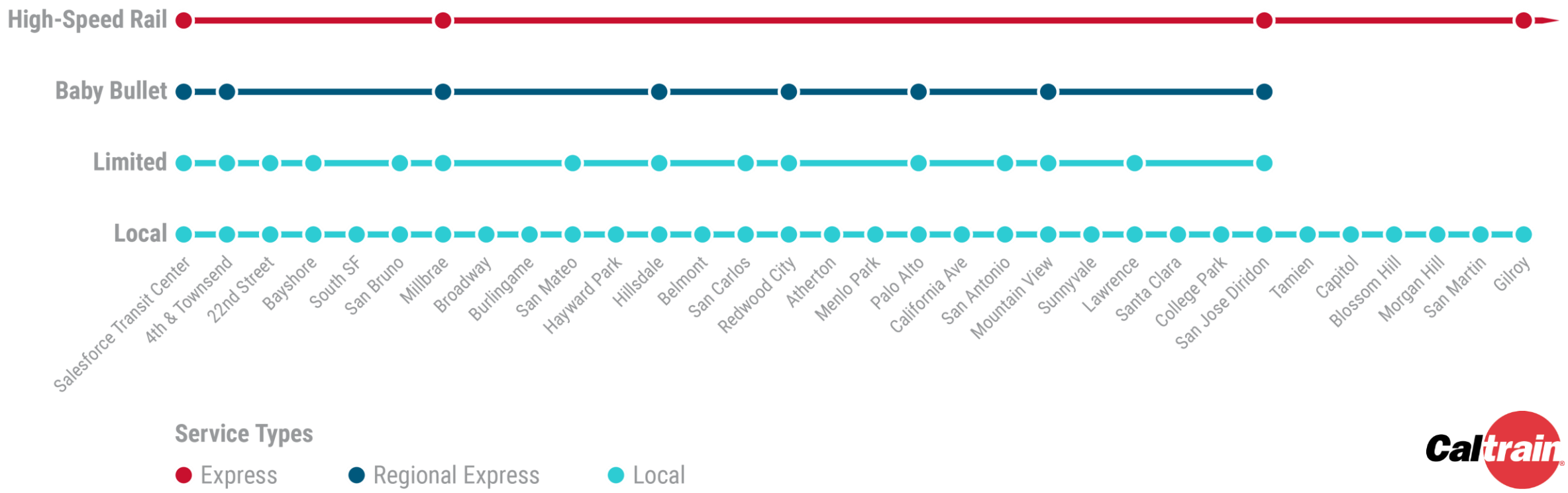
3. Service Investments

What types of investments into operations, systems and infrastructure will be required to achieve the desired types and volumes of service?

Key Concept

Different Markets and Services

Service diagrams shown are illustrative examples of existing Caltrain service as well as planned HSR services



Key Concept

Peak Service Volumes

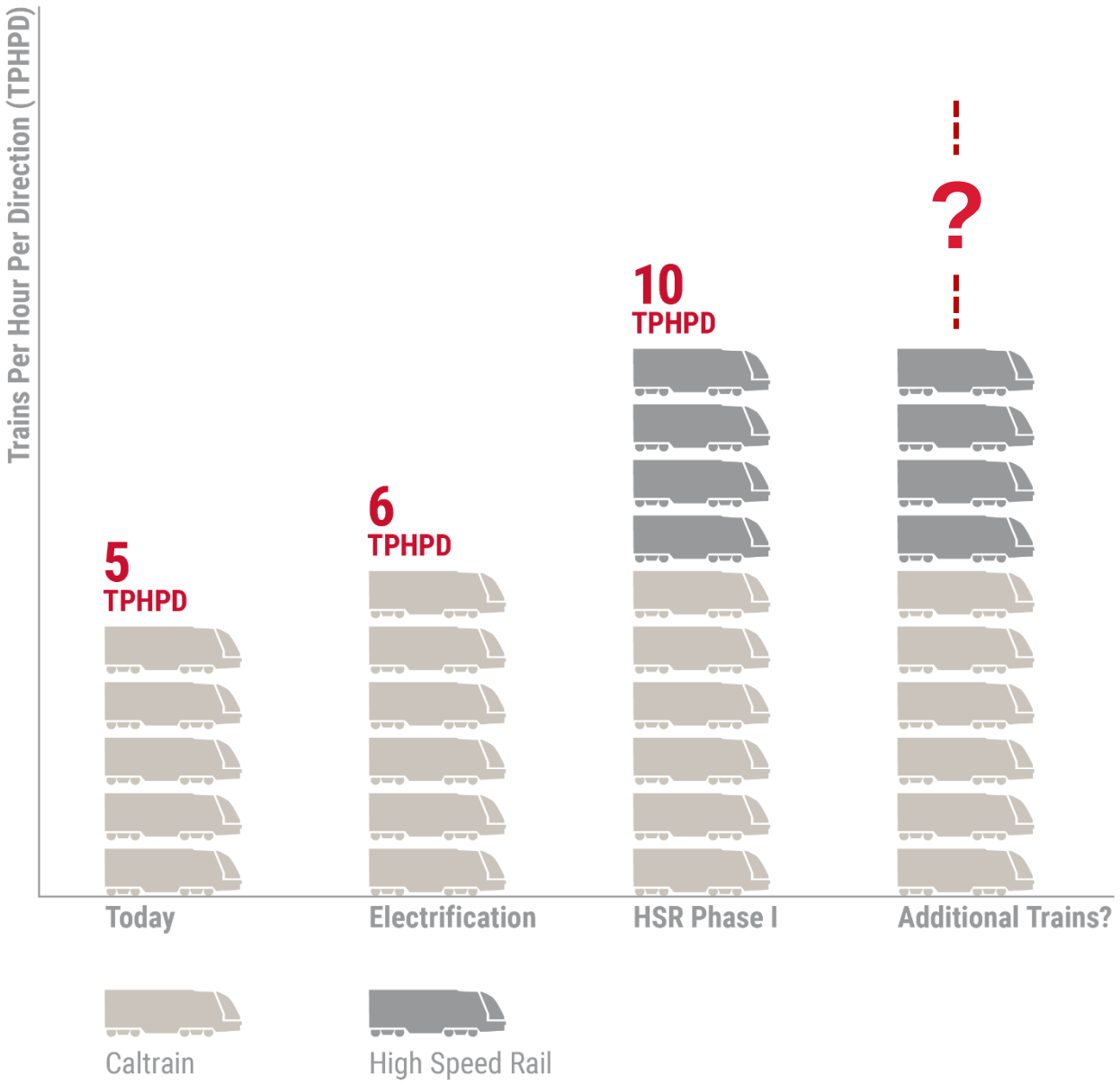
Determining the total number of trains that *could* use the corridor during the peak is a critical planning question:

Why would we want more trains?

- Adding trains may eventually be necessary to satisfy long term demand in the corridor and support local and regional land use objectives
- Additional trains may also be needed to achieve the mix and frequencies of service needed to satisfy market demand

Why think about it now?

- Increased train volumes significantly impact at-grade crossings and terminal facilities. The possibility of growth in total train volumes must be considered as far in advance as possible so that impacts can be addressed and infrastructure can be designed efficiently



Key Concept

Improving Service Requires Investment

There are many different ways to invest in a railroad.

Caltrain can improve its service by investing in improved operations, new systems and expanded infrastructure

Careful planning allows for investments to be made in a way that is cost effective and minimizes community impacts

Operations

- Increased service coordination and expanded operations to maximize the use of physical infrastructure

Systems

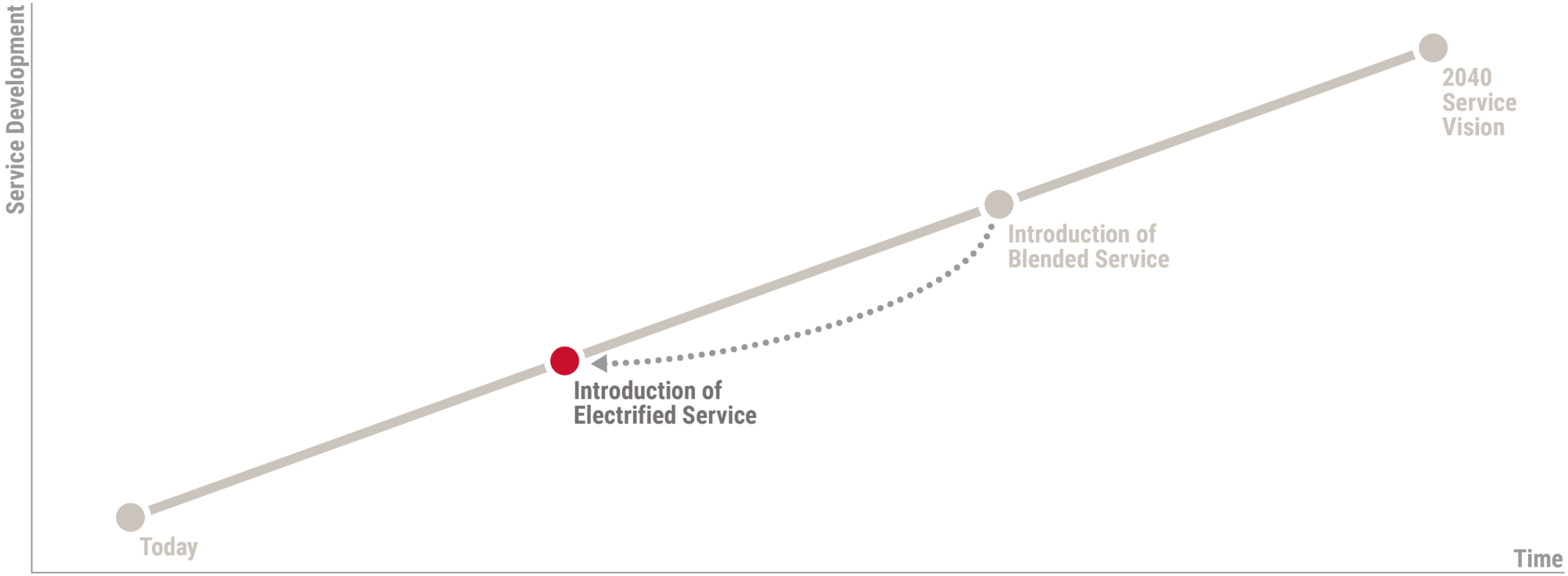
- Improved train performance
- Fleet expansion
- Improved train control and signaling

Infrastructure

- Track enhancement and expansion
- Station and terminal improvements
- Grade crossing investments

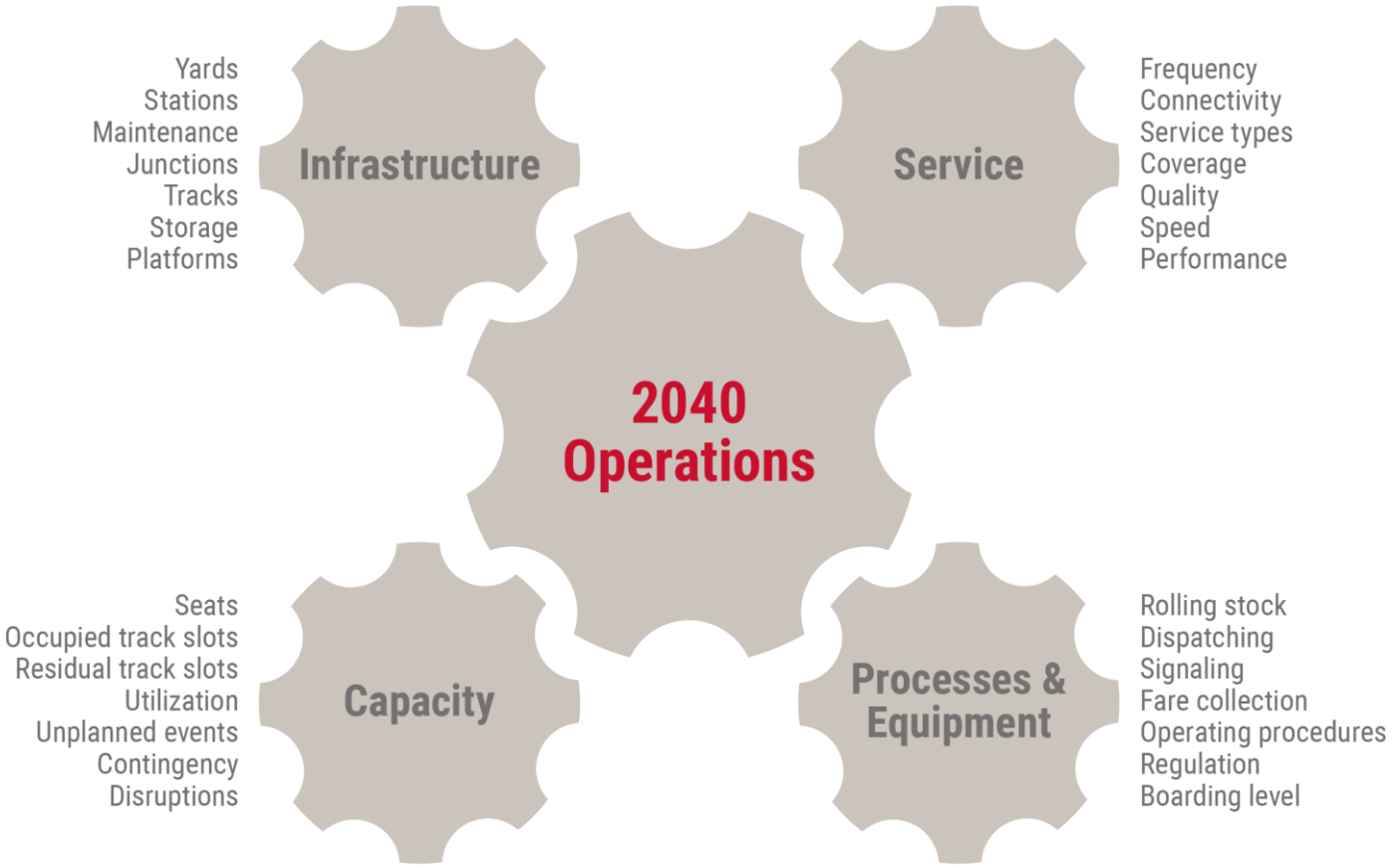
Key Concept

Working Backwards



Key Concept

Fine-Tuning a Complex System



Railroads are complex systems.

Their successful operation is the result of many interconnected pieces and process working together to achieve a desired set of outputs

Major changes to service or infrastructure impact all parts of the railroad and need to be considered holistically on a system wide basis

SHARING SESSION

Do you have any questions about the key service concepts and trade-offs?

The Service Planning Process

1. Establish Parameters and Priorities
2. Sketch Plan Peak-Hour Service Concepts
3. Refine Concepts into 2040 Service Vision
4. Evaluate Terminal Requirements
5. Expand to Gilroy Corridor
6. Develop All-Day Service Plan
7. Phasing and Working Back to 2018
8. Evaluate and Present

The Service Planning Process

1 Establish Parameters and Priorities

- Set policy guidelines and assumptions about operating parameters
- Identify goals for service

2 Sketch Plan Peak-Hour Service Concepts

- Test large set of service patterns/train volumes for their ability to meet service goals and scalability

3 Refine Concepts into 2040 Service Vision

- Fine-tune concepts with highest quality service and scalability
- Confirm infrastructure needs

4 Evaluate Terminal Requirements

- Determine terminal infrastructure required to support service vision

5 Expand to Gilroy Corridor

- Evaluate potential for service expansion to Gilroy and other connecting corridors

6 Develop All-Day Service Plan

- Develop more detailed, all-day service plan from peak-hour vision

7 Phasing and Working Back to 2018

- Work backwards from service vision to develop phasing plan

8 Evaluate and Present

- Simulate full 2040 service plan to assess outcomes (ridership, economics, mobility)

Caltrain

SHARING SESSION

What parts of the service planning process are you most interested in?

Exploring the Corridor – Community Interface

What is the Corridor – Community Interface?

A Framework for Describing how the Railroad Interacts with Its Surroundings

Physical Spaces

Operational Impacts

Land Use Influence

Mobility Outcomes

Economic Interactions

At the Community and Corridor Scale

Individual

Community

Corridor

Region

State

Country

Globe

What Are the Opportunities and Challenges of a Rail Corridor?

Local/Regional Mobility

Place-Making

Noise/Vibration

Physical Structures

Land Use Opportunities

Economic Development

Visual Impact

Traffic/Safety

Caltrain

The Corridor-Community Interface is Rooted in Physical Reality

At Grade

Crossings

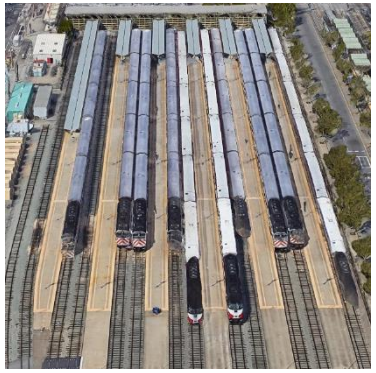
Bridges & Berms

Tunnels

Stations

Connections

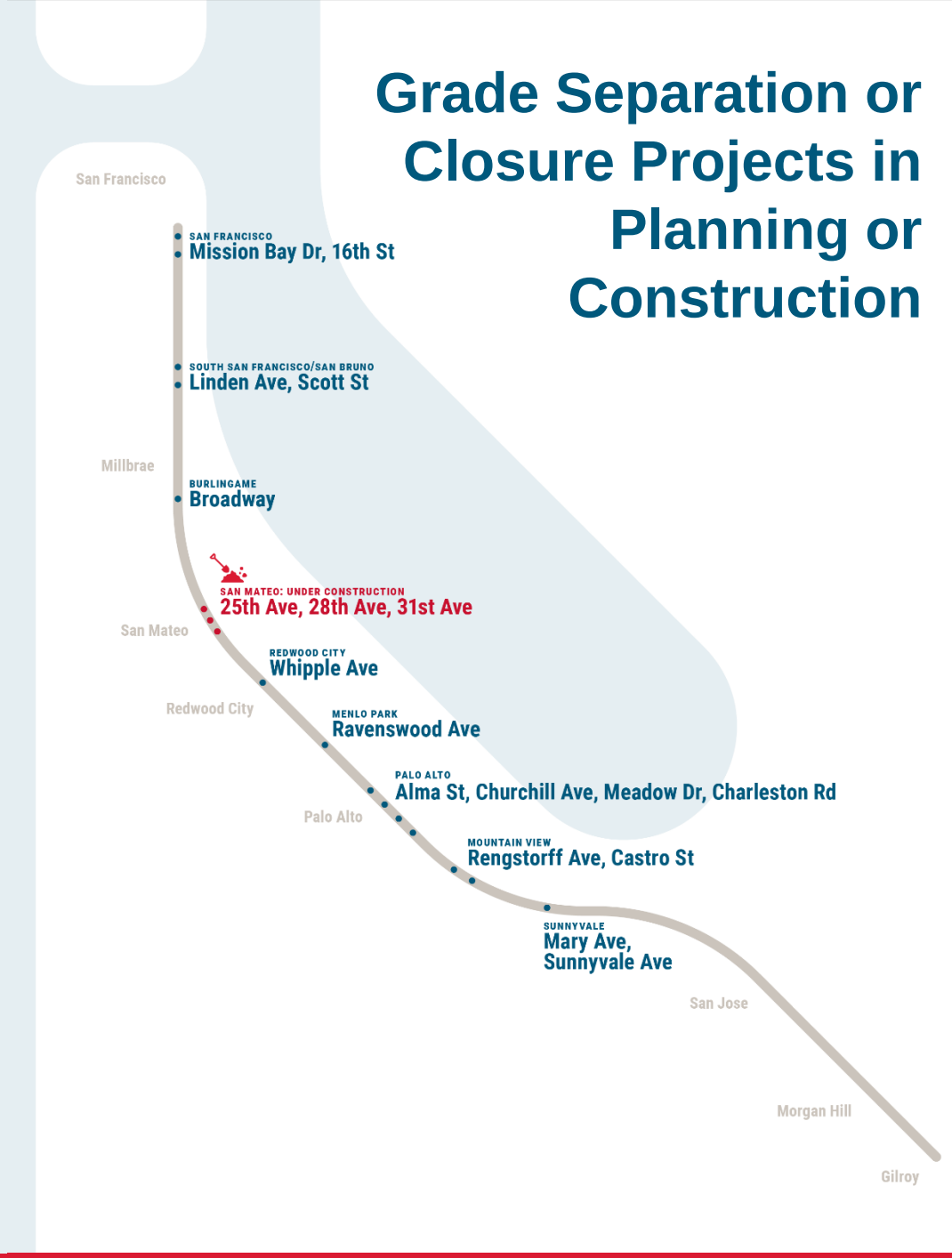
Support Facilities



Construction

At Grade Crossings are a Particularly Pressing and Difficult Issue within the Corridor – Community Interface

Grade Separation or Closure Projects in Planning or Construction



What will the Community Interface Assessment Do?

Analysis

- Document interface between the railroad and its surroundings
- Understand how the interface could change as the railroad and its surrounding communities grow
- Describe how the corridor-community interface is “managed” today
  - Decision-making
  - Delivery of projects
  - Funding
- Compare with approaches used by national and international peer rail corridors

Outcomes

- Work with the communities to identify opportunities for how the corridor, not just individual projects, could be better managed to achieve both community and railroad goals. This includes considering both the appetite and need for a corridor-wide approach to address at-grade crossings.

SHARING SESSION

What elements of the corridor-community interface are most important to your jurisdiction?

Are there any important elements of the community corridor interface we've missed?

What can Caltrain do to help your community?

FOR MORE INFORMATION

WWW.CALTRAIN.COM