

Caltrain Business Plan

Project Update
July 2018 through January 2019





Business Plan Overview



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

Where Are We in the Process?





A Vision for Growth



200 Years on the Caltrain Corridor

Yesterday

Today

Tomorrow

1863
Southern Pacific
service begins
on the corridor



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



1977 Caltrans acquires
Southern Pacific
Corridor
1987 Baby Bullet
service is
commenced



2004 Baby Bullet
service is
reduced



2027 and Beyond
Caltrain and High-
speed Rail operate
on the Corridor



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



Electrification is the Foundation for Growth with Plans for More



2040 Demand

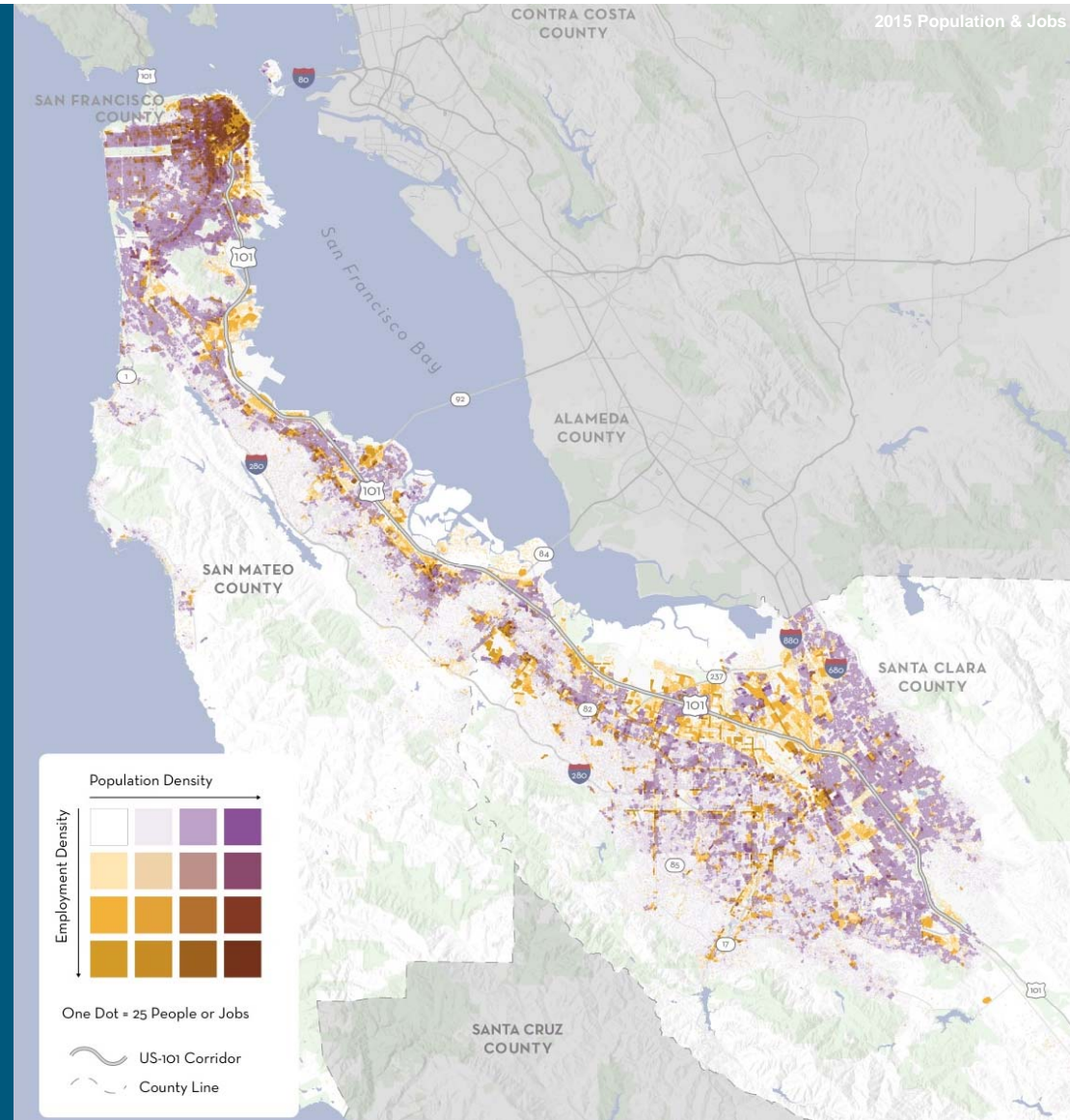
The Caltrain corridor is growing

- By 2040 the corridor expected to add 1.2 million people and jobs within 2 miles of Caltrain (+40%)¹
- 80% of growth expected in San Francisco and Santa Clara Counties

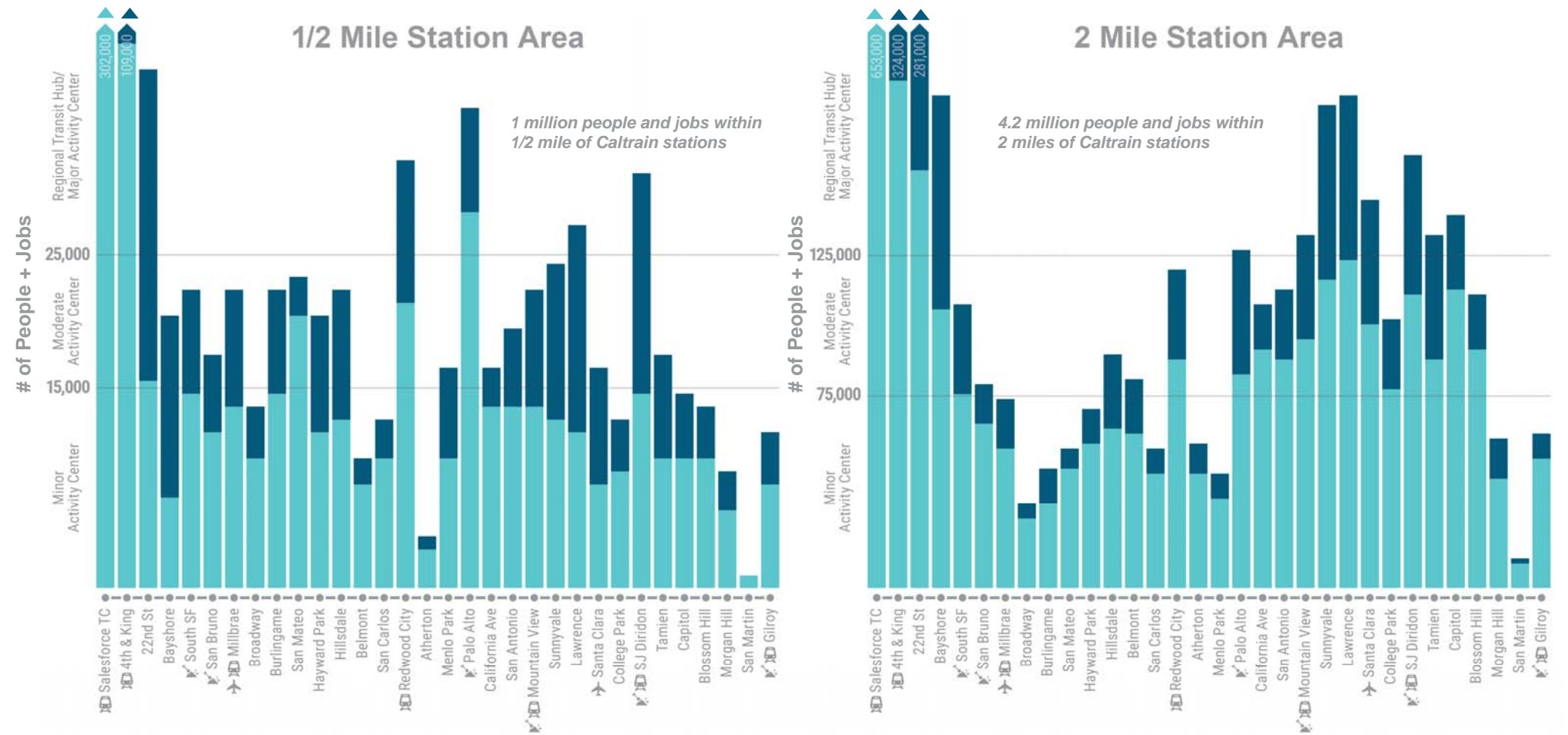
Major transit investments are opening new travel markets to Caltrain

- Downtown Extension and Central Subway to provide more direct connections to downtown San Francisco
- Dumbarton Rail, BART to San Jose, and improvements to Capitol Corridor and ACE to strengthen connectivity with East Bay
- HSR and Salinas rail extensions to increase interregional travel demand

¹Based on Plan Bay Area forecasts and approved projects by individual cities



2040 Land Use & Transportation Context



✈ Indicates a station where substantial growth beyond Plan Bay Area forecasts is anticipated, but not yet approved



Crafting Scenarios



Where do We Start?

The Caltrain corridor is not a blank slate



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

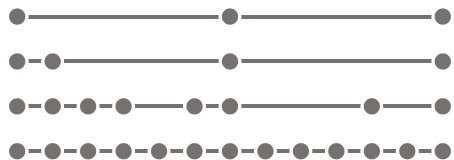


Fiscal Reality

- Realistic scale
- Value for money

Planning within Constraints – Key Choices and Tradeoffs

Service can be improved and expanded but tradeoffs and choices are required across all scenarios. There is no perfect answer.



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

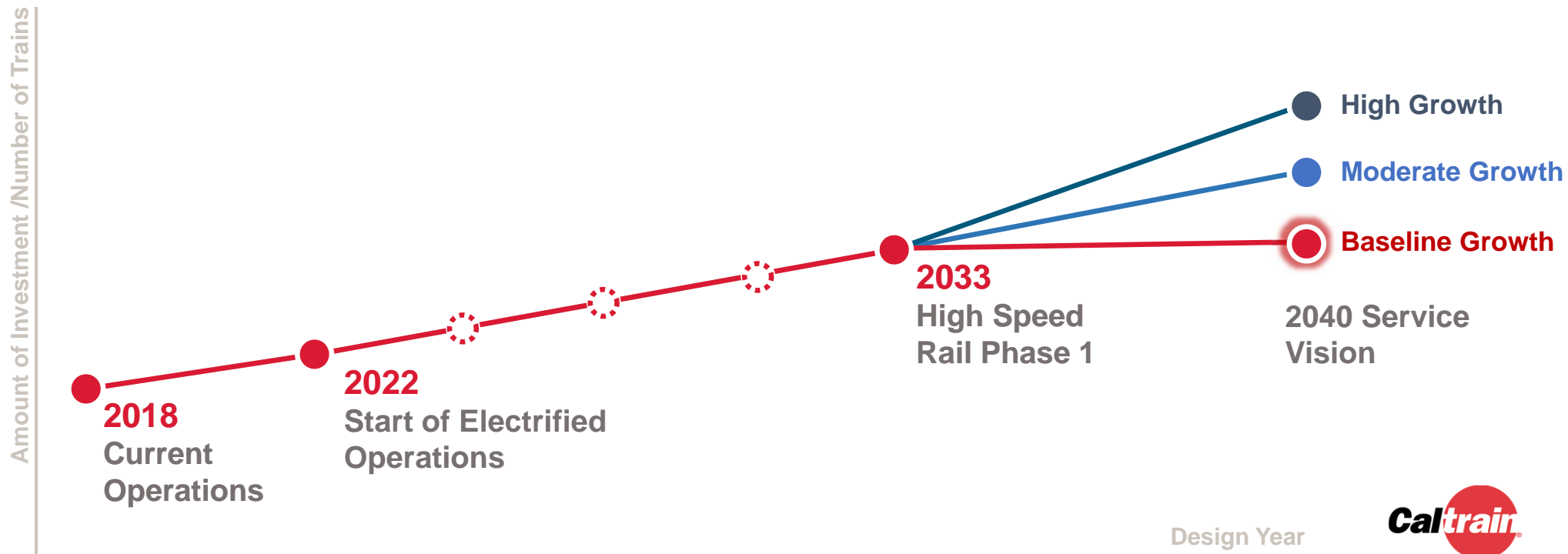


3. Service Investments

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



Baseline Growth



2040 Baseline

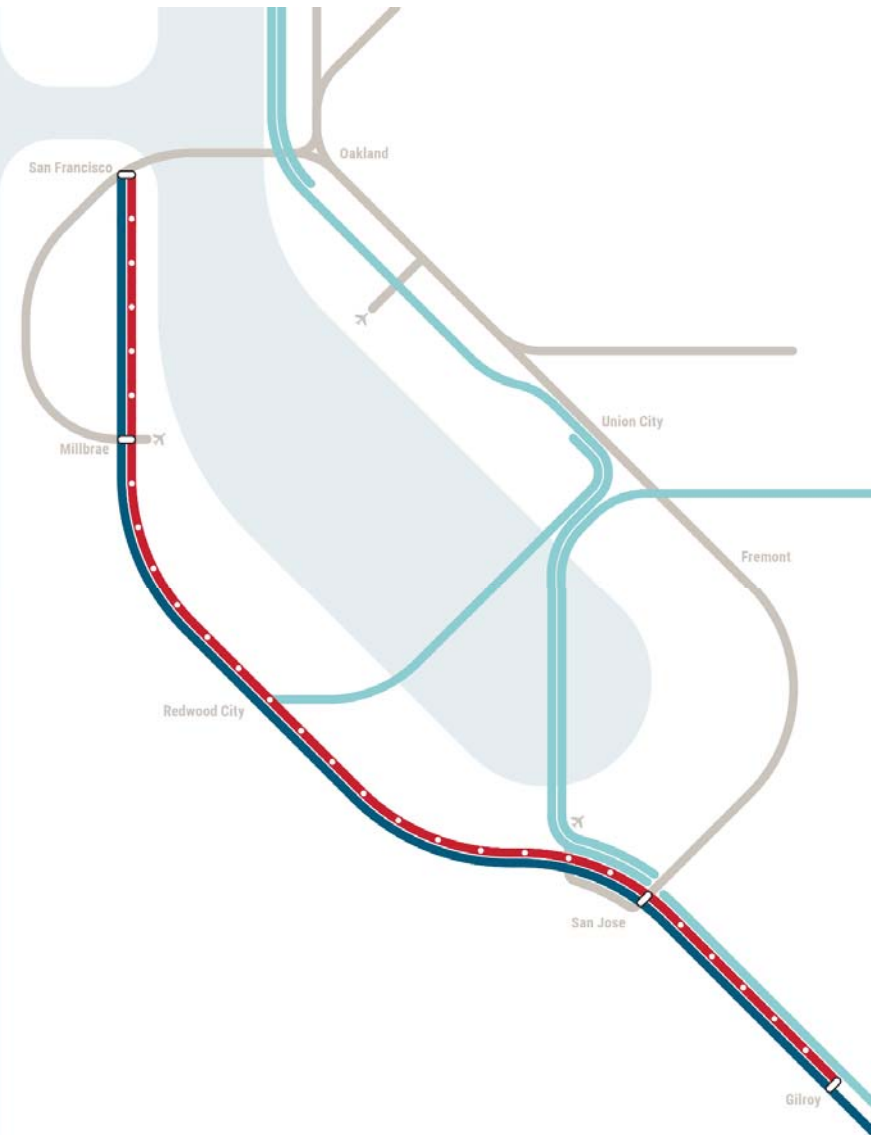
The “Baseline” growth scenario includes service assumptions that meet the JPB’s existing policy commitments and reflect past and ongoing Blended System planning

Operating Parameters

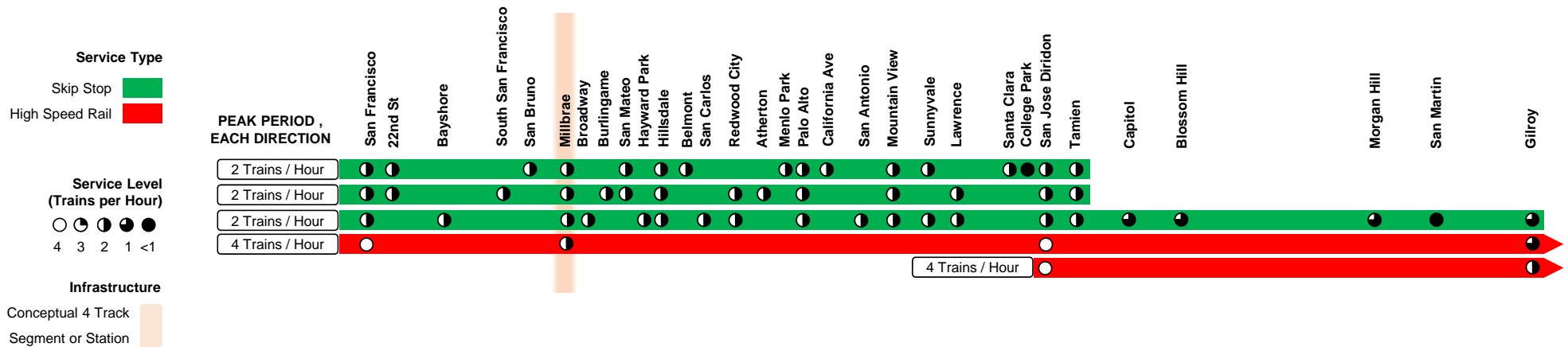
- Blended service with 10 trains per hour, per direction north of San Jose (6 Caltrain, 4 HSR)
- Blended operations with existing/committed levels of Caltrain service assumed south of San Jose (equivalent of 4 round trip Caltrain trains per day)

Service Pattern

- Historically, Caltrain has planned to operate a skip stop service after electrification
- Blended service planning with HSR has carried forward this concept
- There is some flexibility in service levels and stopping patterns at individual stations



2040 Baseline Scenario (6C+4HSR Trains)



Features

- Blended service with up to 10 TPH north of Tamien (6 Caltrain + 4 HSR) and up to 10 TPH south of Tamien (2 Caltrain + 8 HSR)
- Three skip stop patterns with 2 TPH – most stations are served by 2 or 4 TPH, with a few receiving 6 TPH
- Some origin-destination pairs are not served at all

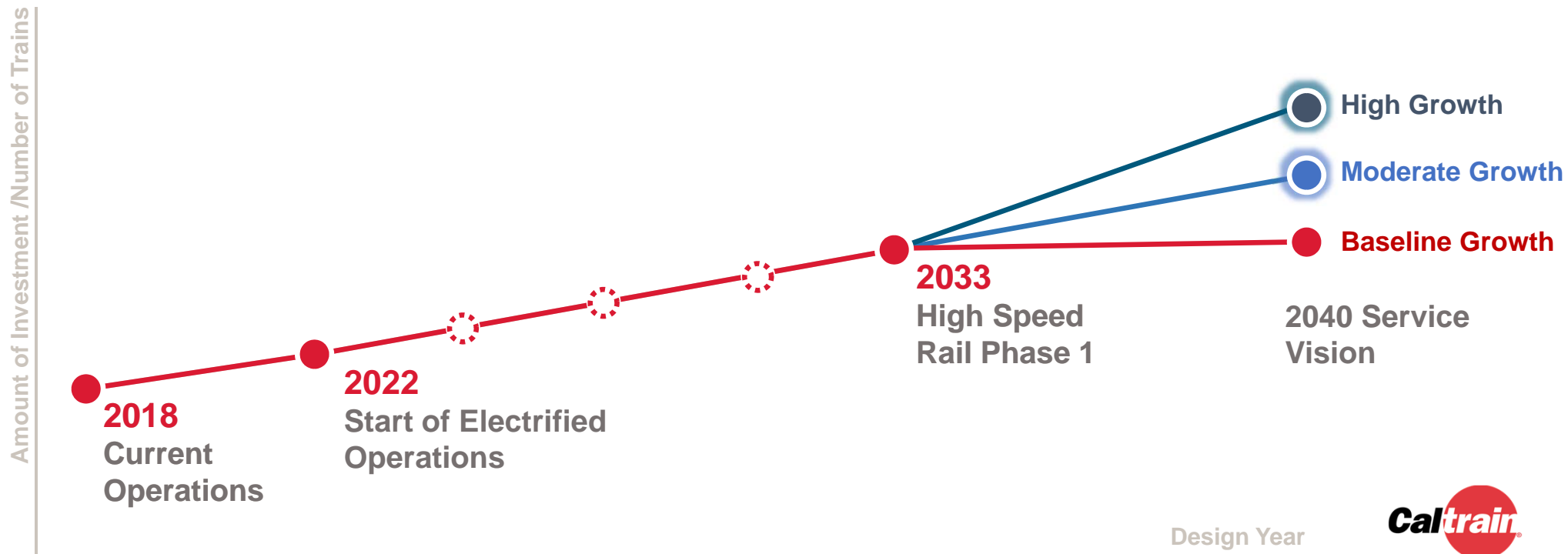
Passing Track Needs

- Less than 1 mile of new passing tracks at Millbrae associated with HSR station plus use of existing passing tracks at Bayshore and Lawrence

Options & Considerations

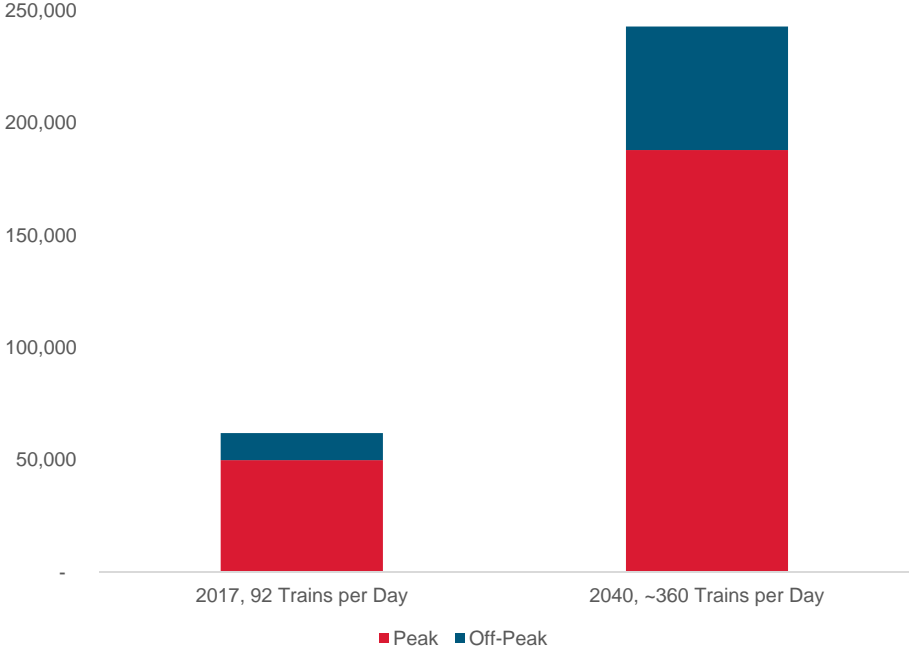
- Service approach is consistent with PCEP and HSR EIRs
- Opportunity to consider alternative service approaches later in Business Plan process

Higher Growth Scenarios



Exploring the Potential Long Term Demand for Caltrain Service

Using Plan Bay Area numbers for projected growth in jobs and housing, an unconstrained model run of high frequency, all-day BART-like service in the Caltrain corridor suggests that by 2040 there could be underlying demand for approximately 240,000 daily trips on the system



Description	2017: 92 Trains/Day	2040: ~360 Trains/Day
Daily	62,000	240,000
Peak	50,000	185,000
Off-Peak	12,000	55,000

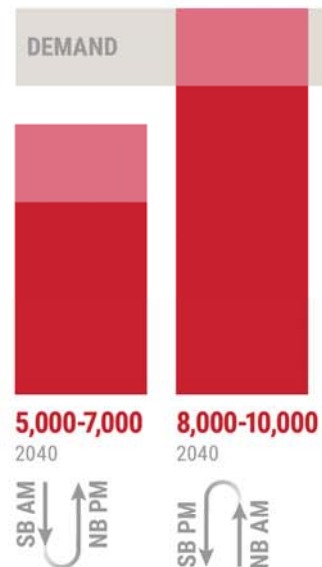


Throughput Demand vs. Capacity

To comfortably serve the full potential market for rail in 2020, Caltrain would need to operate 8 trains per hour, per direction (TPHPD) with 10 car trains or 12 TPHPD with 8 or 10 car trains

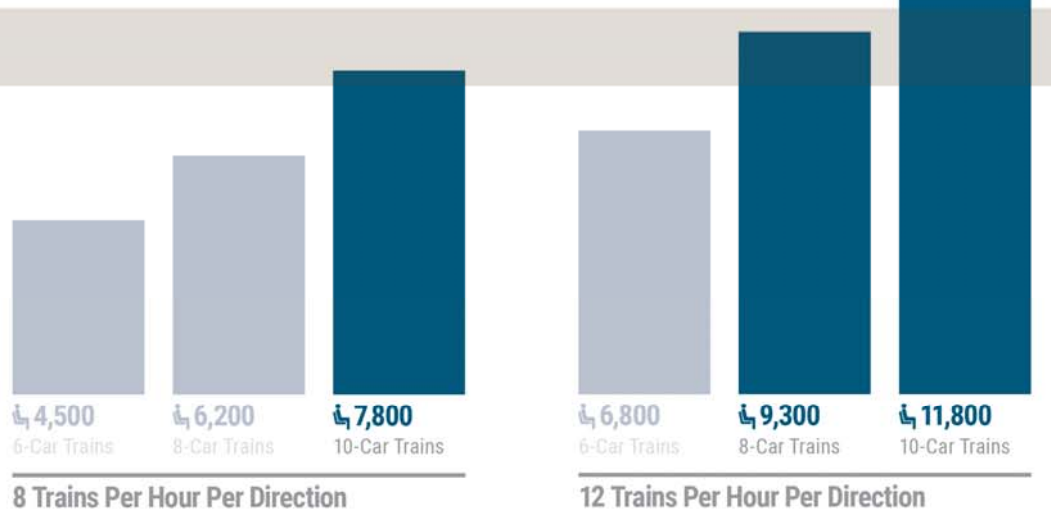
Passenger Demand

Peak-Hour Ridership at Peak Load Point (Millbrae-Burlingame)



Caltrain Seated Capacity

Peak-Hour Trains per Hour per Direction and Associated Seated Passenger Capacity



Seated capacity based on Stadler EMU with different door and bike car configurations. Does not include consideration of potential HSR capacity to serve demand



Service Goals

1. Maximize Ridership

With fast and frequent service between major markets

2. Improve Coverage and Connectivity

By ensuring that most stations are connected with frequent service

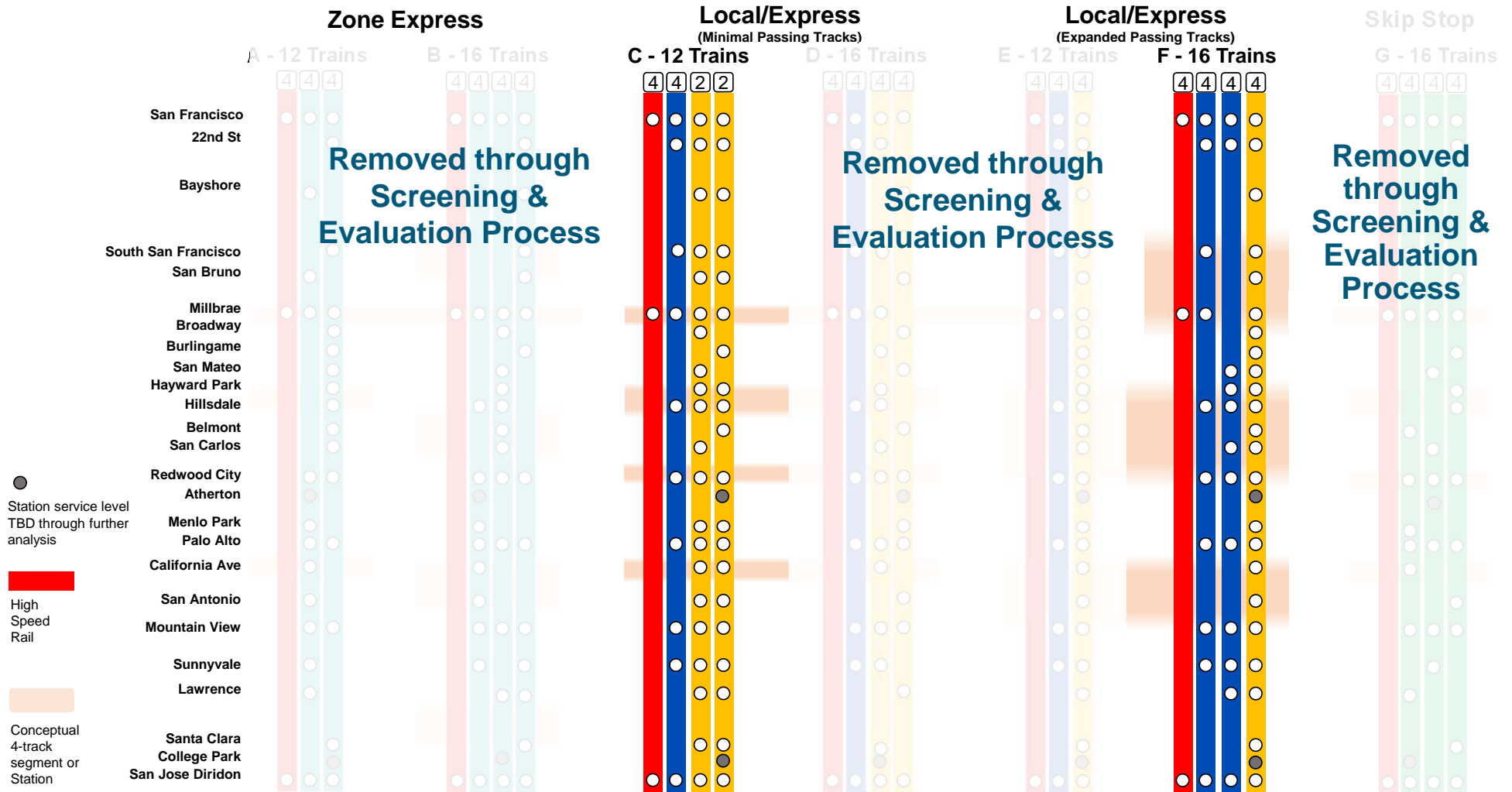
3. Enhance Capacity and Convenience

With service that is comfortable and easy to understand

4. “Right Size” New Infrastructure

By investing strategically to provide corridor-wide benefits

Screening & Evaluation Results



Assumes standardized HSR service; the 2018 HSR Business Plan expects 2 trains per hour, per direction at Millbrae

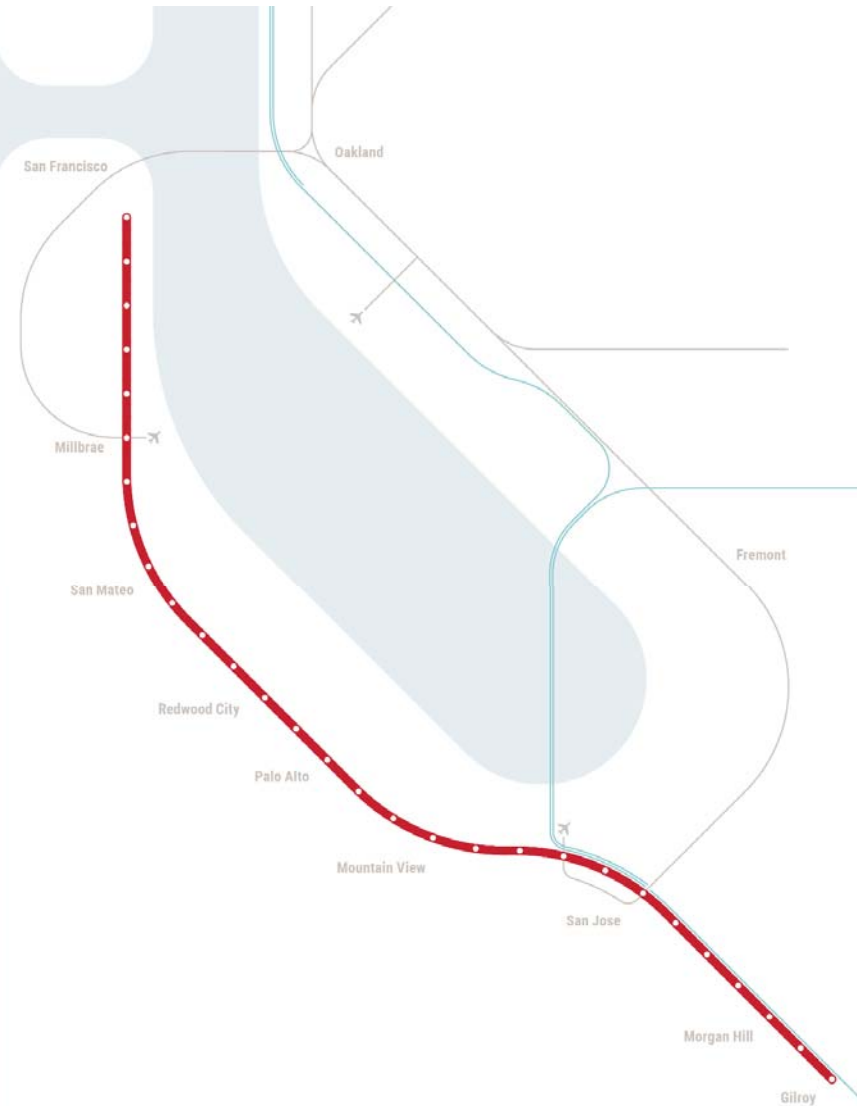
Expanding Concepts South of San Jose

North of San Jose

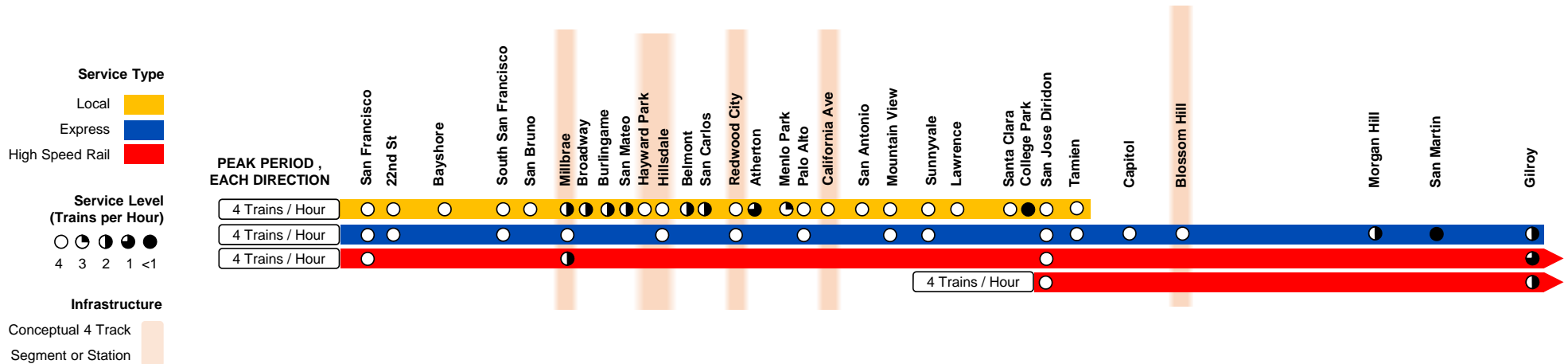
- Corridor between San Francisco and Tamien owned by Caltrain
- Electrification under construction
- Caltrain will share corridor with HSR

South of San Jose

- Union Pacific owns existing corridor between Tamien and Gilroy
- HSR and State of California negotiating with UP
- 2018 HSR Business Plan contemplates building two electrified tracks alongside non-electrified freight track
- Creates an opportunity to extend electrified Caltrain service south to Gilroy



Moderate Growth Scenario (8C + 4HSR Trains)



Features

- A majority of stations served by 4 TPH local stop line, but Mid-Peninsula stations are serviced with 2 TPH skip stop pattern
- Express line serving major markets – some stations receive 8 TPH
- Timed local/express transfer at Redwood City

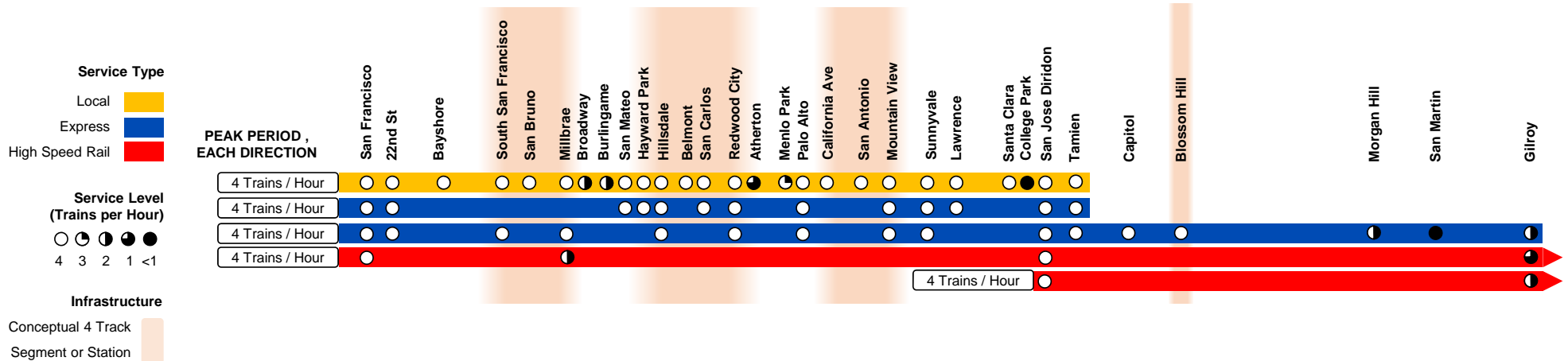
Passing Track Needs

- Up to 4 miles of new 4-track segments and stations: Hayward Park to Hillsdale, at Redwood City, and a 4-track station in northern Santa Clara county (Palo Alto, California Ave, San Antonio or Mountain View. California Ave Shown)

Options & Considerations

- To minimize passing track requirements, each local pattern can only stop twice between San Bruno and Hillsdale - in particular, San Mateo is underserved and lacks direct connection to Millbrae
- Each local pattern can only stop once between Hillsdale and Redwood City
- Atherton, College Park, and San Martin served on an hourly or exception basis

High Growth Scenarios (12C +4HSR Trains)



Features

- Nearly complete local stop service – almost all stations receiving at least 4 TPH
- Two express lines serving major markets – many stations receive 8 or 12 TPH

Passing Track Needs

- Requires up to 15 miles of new 4 track segments: South San Francisco to Millbrae, Hayward Park to Redwood City, and northern Santa Clara County between Palo Alto and Mountain View stations (shown: California Avenue to north of Mountain View)

Options & Considerations

- SSF-Millbrae passing track enables second express line; this line cannot stop north of Burlingame
- Tradeoff between infrastructure and service along Mid-Peninsula - some flexibility in length of passing tracks versus number and location of stops
- Flexible 5 mile passing track segment somewhere between Palo Alto and Mountain View
- Atherton, College Park, and San Martin served on an hourly or exception basis

Developing All Day Service Plans

Off-peak and weekend service provides unique opportunities and challenges for Caltrain

- The Caltrain corridor has very high all-day travel demand, 7 days a week
- Demand for off-peak service may increase overtime along with corridor development and densities
- Early morning, midday, evening, and weekend periods all present different challenges and opportunities related to operating costs and work windows for construction and maintenance



How do we Choose a Service Vision?

Choosing a long range “Service Vision” is not just about picking which service pattern looks the best- it requires evaluating which package of service and investments will deliver the best value to the corridor and the region

Service



This update describes different **illustrative** 2040 service concepts that underlie each Growth Scenario. The different concepts shown are not proposals or recommendations. They represent an indicative **range of options** for how Caltrain service could grow given different levels of investment in the corridor

Business Case



During the spring of 2019 the Business Plan team will develop a detailed “Business Case” analysis for each of the different growth scenarios. The Business Case will quantify the financial implications and wider costs and benefits of each growth scenario

Planning to Deliver

How will the Caltrain Organization Support the Service Vision?

Key Concept- Service Delivery

- How Caltrain operates and manages service (both on and off the corridor)
- Includes activities like train operations, maintenance, capital project delivery, joint development, planning, and budgeting

Key Concept - Governance

- The manner in which Caltrain is overseen by the Board
- Focus on the agency's decision making process and the Board's oversight of the Caltrain organization



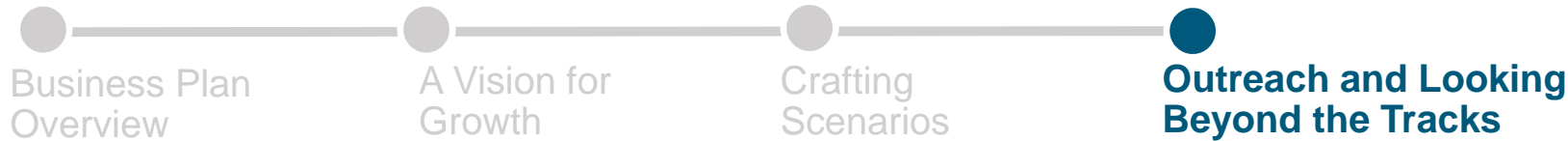
Analysis and Outcomes

- Interviews with stakeholders, organizational “mapping” and analysis of current Caltrain structure
- Comparison with national and international peer railroads
- Understand the range of potential organizational structures for both service delivery and governance and evaluate at a high level
- Work with JPB and JPA members to determine strategy and next steps
- Identify near term priorities related to Business Plan implementation

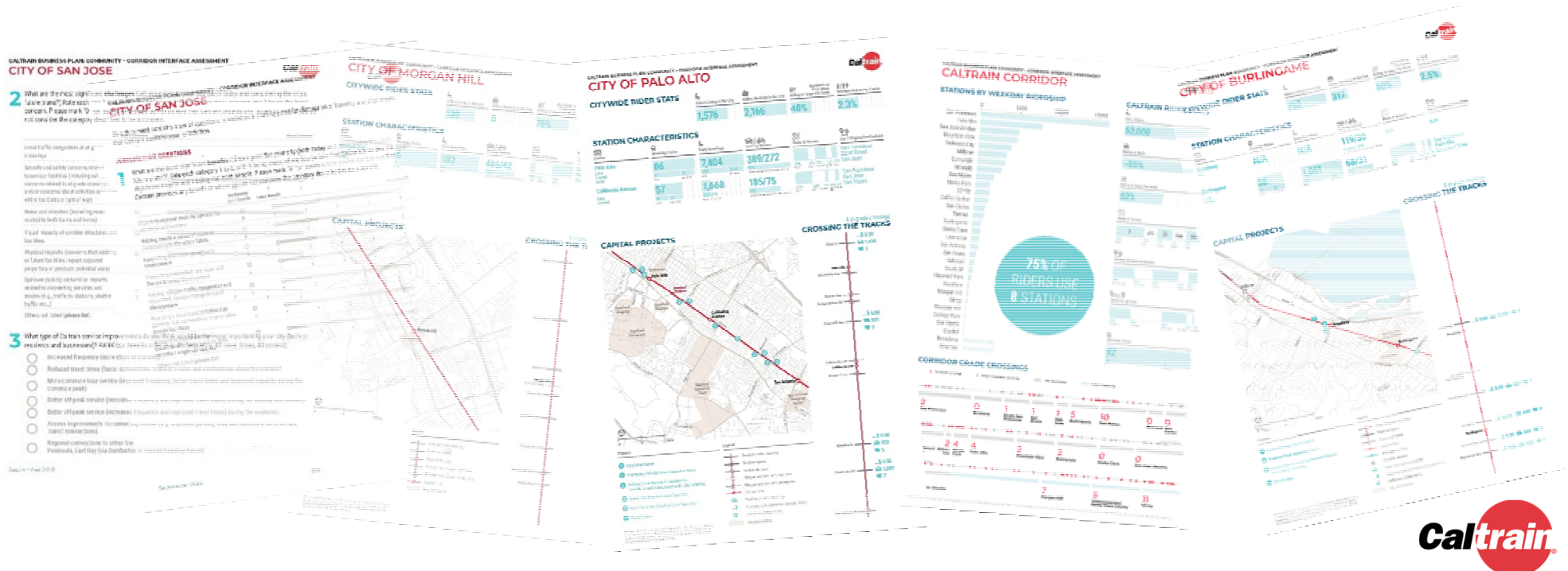




Looking Beyond the Tracks



Direct Engagement with Local Jurisdictions is Central to this Effort



Key Themes From Discussions with City Staff



Service Levels & Schedules

Travel demand and mode split goals in relation to existing and anticipated roadway congestion



Physical Corridor

Grade crossings, grade separations, and the stretches of fencing, walls, and vegetation in between



Land Development

Placemaking, jobs-housing balance, transit-oriented development, and zoning changes



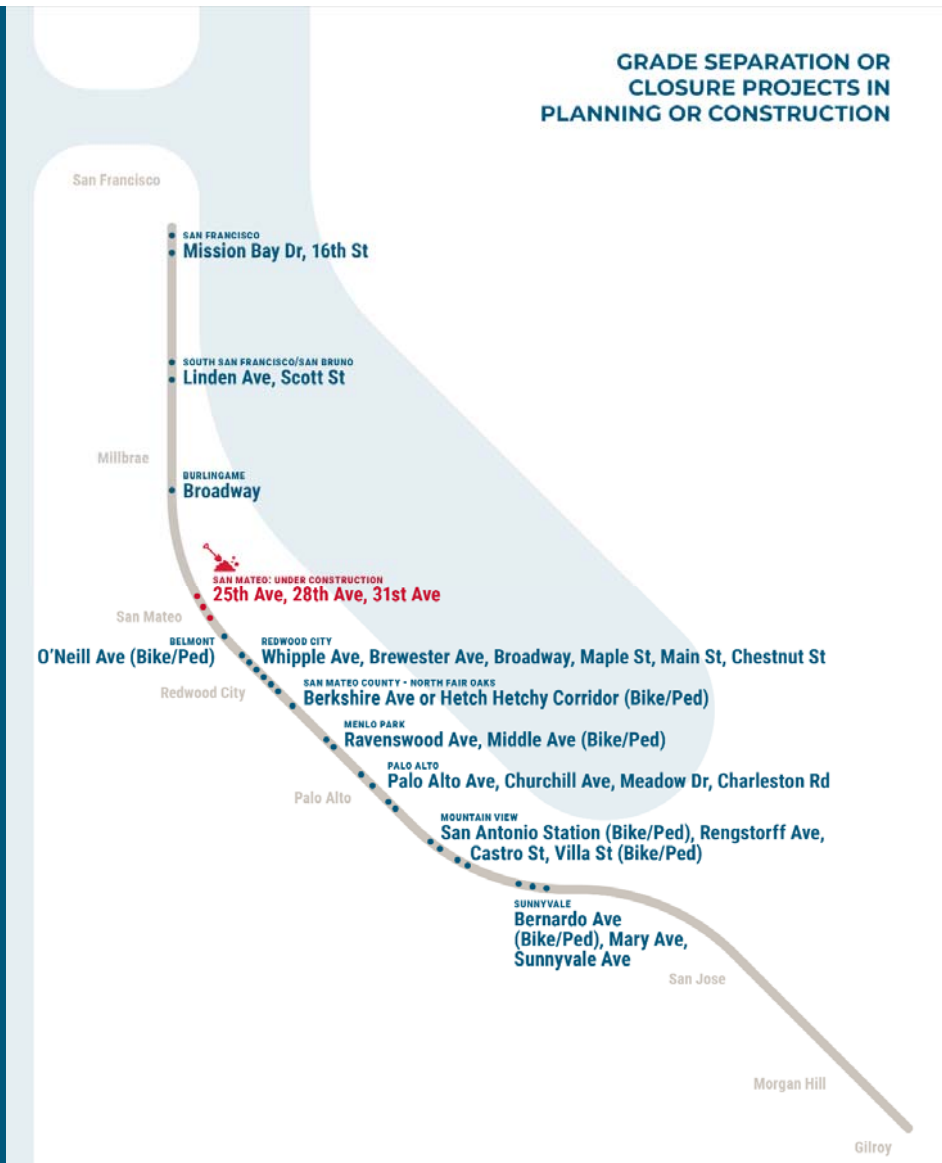
Station Connectivity & Access

Local first/last mile solutions, multi-modal access, and equitable incentive programs

Grade Separations are Critical

All of the scenarios being considered involve significant increases in the number of trains per hour operating in the corridor

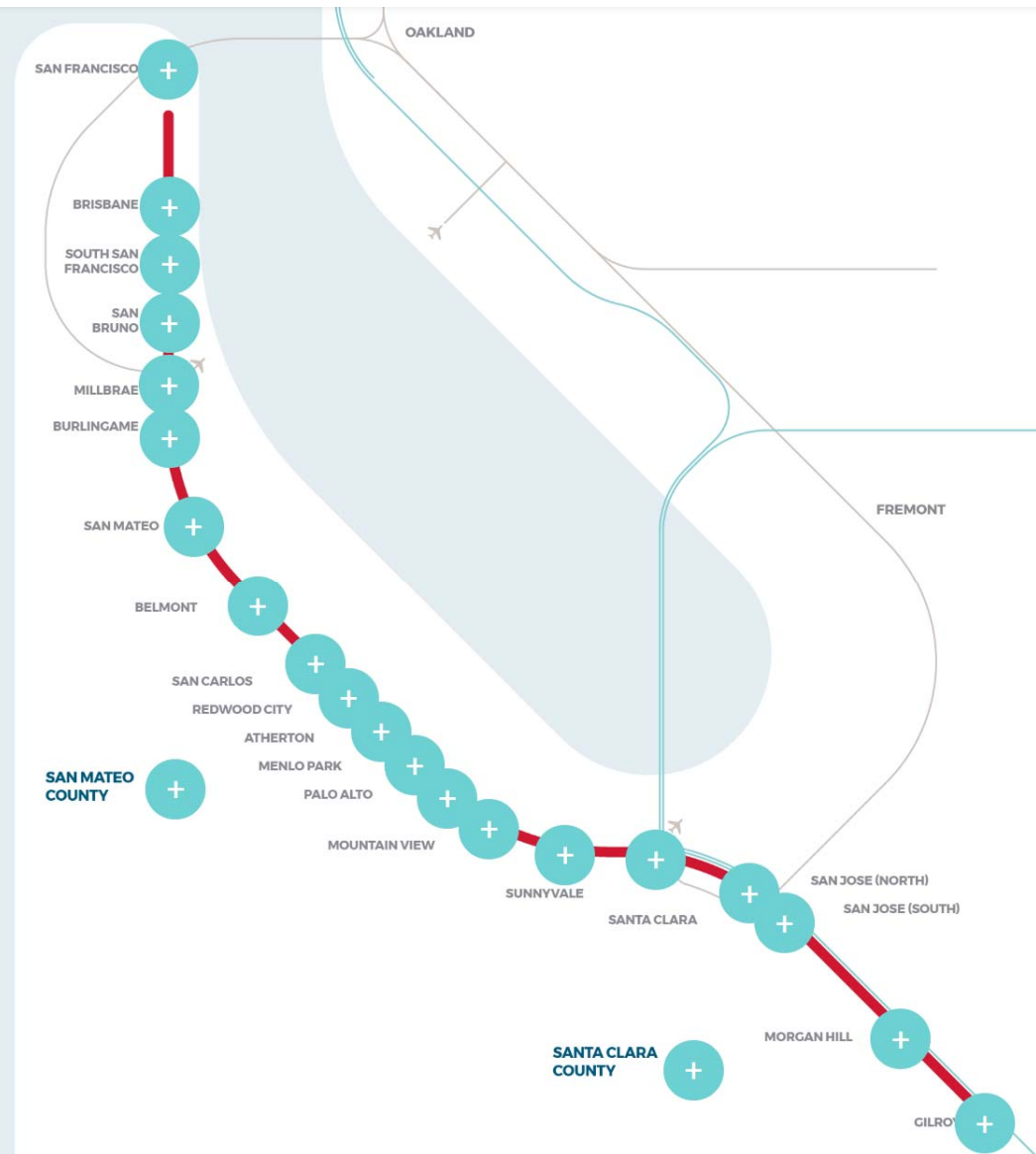
The Business Plan will consider the costs and challenges associated with grade separations and improvements to at-grade crossings as part of the overall plan



Business Plan Website is Up!

- Project timeline
- Project summary
- Corridor-wide factsheet
- Jurisdiction-specific factsheets
- Monthly presentations
- Glossary of key terms
- FAQs

www.caltrain2040.org



Outreach Activities to Date

July – December Timeline

	July	August	September	October	November	December
Local Policy Maker Group	●	●	●		●	●
City/County Staff Coordinating Group	●	●	●		●	●
Project Partner Committee	●	●	●	●	●	●
Community Interface Meetings (One Per Jurisdiction)			●	●	●	
Stakeholder Advisory Group				●		
Partner General Manager				●		
Website & Survey Launch					●	
Community Meetings (One Per County)					●	
Sister Agency Presentations					●	●

Outreach Activities to Date

July – December by the Numbers

Stakeholders Engaged

21

Jurisdictions

26

Public Agencies

39

Stakeholder
Group Meetings

93

Organizations in Stakeholder
Advisory Group

Public Outreach

18

Public Meetings
and Presentations

700+

Survey Responses

2,600

Website Hits

27,000

Social Media Engagements

Next Steps



FOR MORE INFORMATION

WWW.CALTRAIN.COM

