



Local Policy Maker Group (LPMG) Meeting

Thursday, March 28, 2019

5:30 p.m. – 7:30 p.m.

**SamTrans Offices – Bacciocco Auditorium 2nd Floor
1250 San Carlos Ave., San Carlos**

Agenda

1. Staff Report
2. Caltrain Business Plan
3. Caltrain Electrification Project
4. HSR Update (Presented by California High-Speed Rail Authority Staff)
5. Public Comments
6. LPMG Member Comments/Requests
 - a. Grade Separation Toolkit
7. Next Meeting
 - a. Thursday April 25, 2019 at 5:30pm

All items on this agenda are subject to action



Memorandum

Date: March 28, 2019
To: CalMod Local Policy Maker Group (LPMG)
From: Sebastian Petty, Senior Advisor
Re: Caltrain Business Plan

Project update

The following is one in a series of monthly project updates for the Caltrain Business Plan. These updates provide a high level summary of project activities and progress and are paired, when applicable, with a presentation that reflects project materials and messaging shared with stakeholder groups during the subject month. The following “March” update covers work completed in late February of 2019 and March of 2019.

ONGOING TECHNICAL WORK

In early spring of 2019 the Caltrain Business Plan team continued intensive technical work on the plan. The following technical work products are documented in the attached presentation that was provided to the Project Partner Committee as well as the CSCG and LPMG;

- Completion of initial terminal planning related to San Francisco and the Diridon Station Area
- Completion initial ridership forecasts for all growth scenarios and interim years

The following additional technical analysis is ongoing and will be presented in the coming months;

- Continued service planning work including
 - Initiation of dynamic simulation of all service concepts
 - Exploration of additional service concepts and variations
- Specification and quantification of capital investments needed to support service scenarios including track and system upgrades, station modifications, fleet and support facilities and grade crossing improvements and separations
- Finalization of key inputs and assumptions into the integrated business model including the calculation of key operating and maintenance costs
- Ongoing organizational assessment work specifying key railroad functionalities, mapping of Caltrain organization and analysis of national and international comparison railroads as well as development of preliminary organizational recommendations

- Ongoing community interface documentation and development of comparison corridor case studies

MEETINGS AND OUTREACH

Stakeholder outreach and engagement activities continued in February and March with a number of events that covered material related to service planning. The following major meetings occurred in February and March;

- San Mateo County City/County Association of Governments Committee on Congestion Management and Air Quality (Feb 25th)
- Local Policy Maker Group Meeting (February 28)
- Caltrain Business Plan Ad Hoc Committee (March 11)
- San Francisco Transportation Authority Board (March 12)
- City County Staff Group (March 20)
- Friends of Caltrain Event (March 20)
- San Mateo County City/County Association of Governments Committee Congestion Management Technical Advisory Committee (March 21)
- San Mateo County City/County Association of Governments Committee Congestion Management and Environmental Quality Committee (March 25)
- Local Policy Maker Group (March 28)

The Project Partner Committee (PPC) held its regular, full meeting on March 12.

NEXT STEPS

The first part of the Business Plan is focused on the development of a long-range service vision for the railroad accompanied by an assessment of the community-corridor interface and the Caltrain organization. The remainder of the project will be focused on the creation of the implementation plan, including a detailed business plan and funding approach. The Business Plan team will continue to provide monthly updates throughout the Business Plan. Over the next several months the team will provide significant updates on further service planning details, ridership projections, and capital and operating costs associated with each scenario.

Caltrain Business Plan

MARCH 2019

Local Policy Maker
Group

March 2019



Starting to Build a Business Case



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

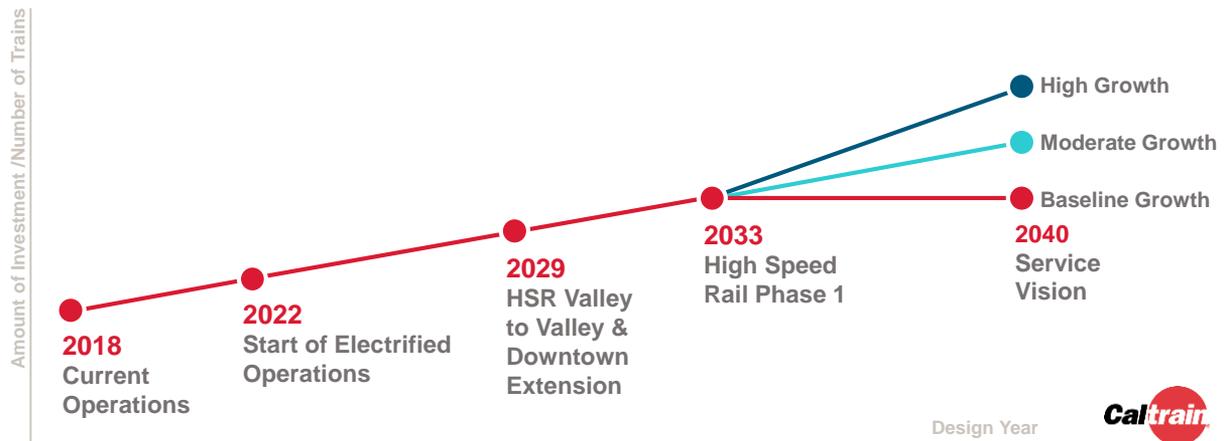
- Organizational structure of Caltrain including governance and delivery approaches
- Funding mechanisms to support future service



Where Are We in the Process?



2040 Service Scenarios: Different Ways to Grow



2040 Baseline Growth Scenario (6 Caltrain + 4 HSR)



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

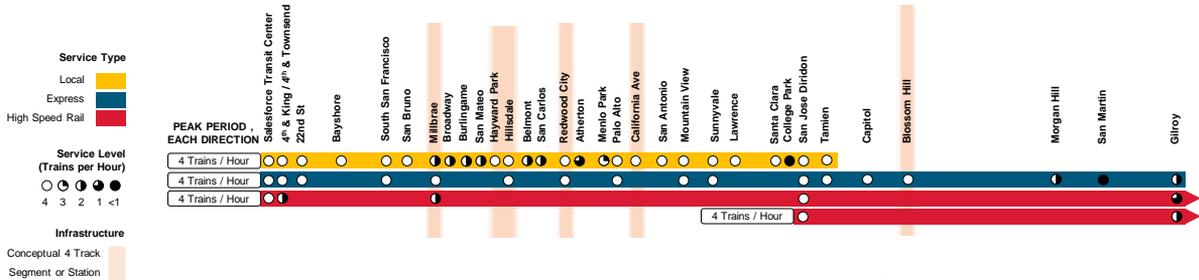
Options & Considerations

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

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

Moderate Growth Scenario (8 Caltrain + 4 HSR)



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

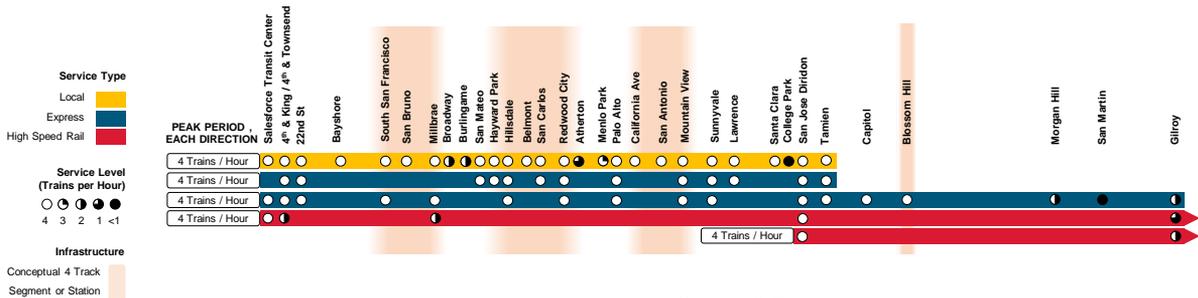
Options & Considerations

- 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

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)

High Growth Scenarios (12 Caltrain + 4 HSR)



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 (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



Terminal Analysis





Terminal Planning Context



Purpose and Process

Purpose

- Extend initial service planning analysis to identify how each growth 2040 growth scenario will function at and around terminals
- Establish initial service plans as a basis for estimating ridership, identifying areas of operational risk and clarifying needed investments

Process

- Initial staff discussions with partner agencies at each terminal regarding goals and planning parameters
- Initial planning analysis
- Follow up discussion and review with partner agencies at each terminal
- Move to detailed simulation analysis and continued coordination

Service Planning Parameters

The following rail operating parameters are used as the starting point for 2040 service planning. Some variation to these parameters may be explored as service planning progresses

Parameter	HSR	Caltrain
Minimum headway between trains*	2 minutes	2 minutes
Turnaround time at terminal	20 minutes	20 minutes
Minimum station dwell time**	2 minutes	1.0 (high-ridership stations) 0.7 (low-ridership stations)
Train equipment	High speed trainset	8-car electric multiple unit trainset
Speed limit	110 MPH	110 MPH
Recovery time	10% distributed	10% distributed

*Assumes investment in new signal system

**Assumes investment to achieve level-boarding



San Francisco Terminal



San Francisco Terminal

Key Points and Findings

- In the Baseline and Moderate Scenarios preliminary analysis suggests that all train service can utilize Sales Force Transit Center. In the High Growth Scenario the additional 4 trains would terminate at 4th & King.
- Some platform availability preserved at 4th & King in all scenarios to account for event, disruption, and/or regular revenue service
- Direct sharing of platforms between Caltrain and HSR as part of scheduled revenue service provides no direct capacity benefits in any of the scenarios studied at either terminal. The importance of platform interoperability to system reliability is under study through ongoing analysis
- All findings will be further tested and evaluated through simulation analysis



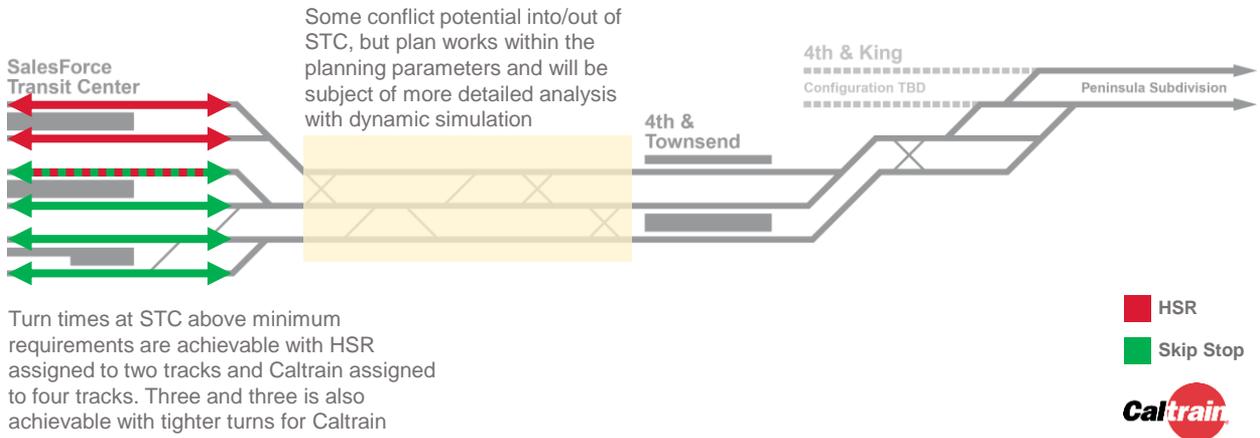
San Francisco Terminal Area



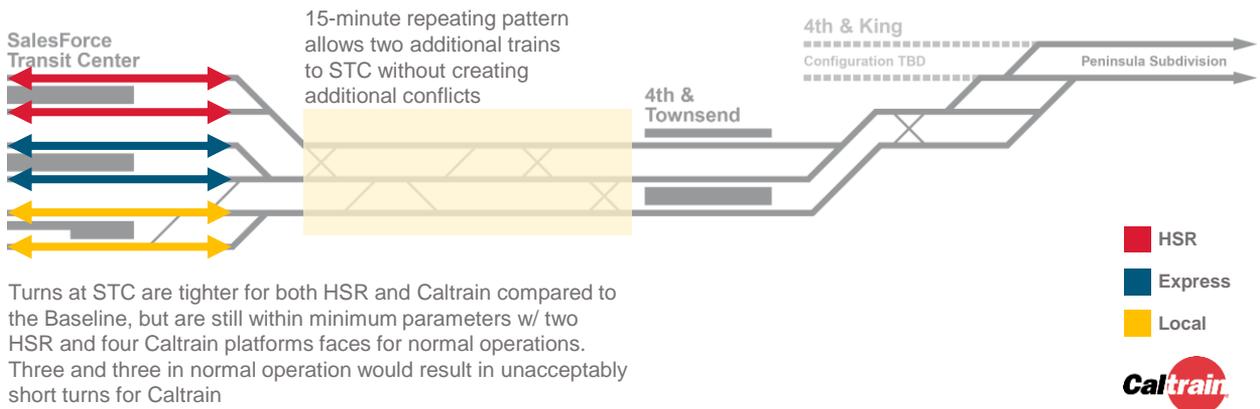
Source: TJPA Draft Preliminary Engineering Track Plans for Phase 2 Downtown Rail Extension (October 25, 2016)



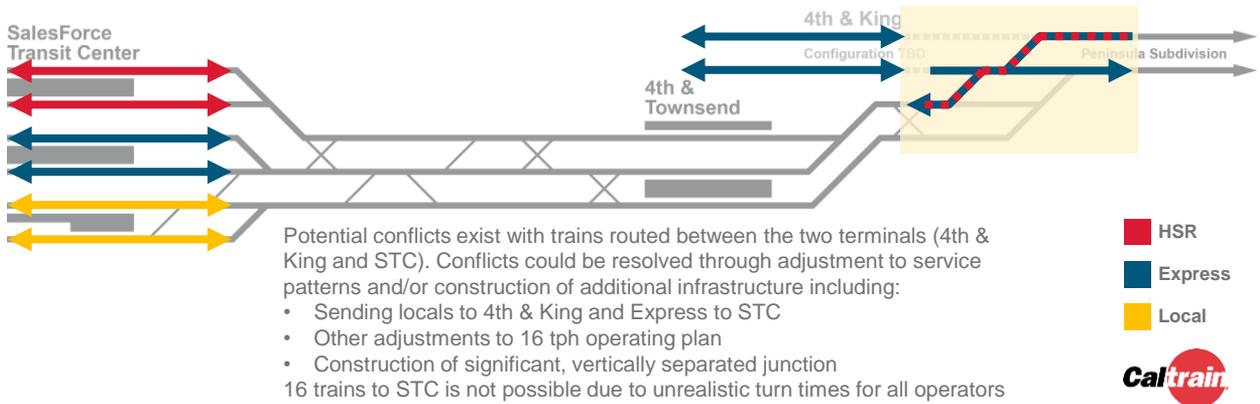
SF Terminal: Baseline Growth



SF Terminal: Moderate Growth



SF Terminal: High Growth



San Jose Terminal



San Jose Terminal

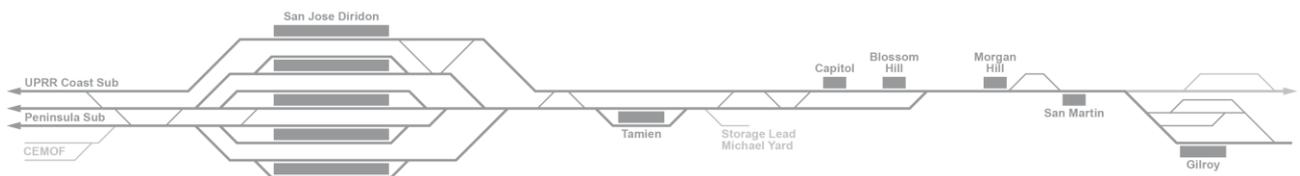
Key Points and Findings

- Work developed in conjunction with Diridon Integrated Station Concept Plan and some analysis is ongoing
- Solutions were found for all three Growth Scenarios that are consistent with ongoing Diridon planning efforts
- For Caltrain, the ability to “turn” trains south of Diridon is important and will require investments
- Analysis of “diesel” system including freight and intercity operators (Amtrak, ACE, and CCJPA) IS ongoing
- All findings will be further tested and evaluated through simulation analysis



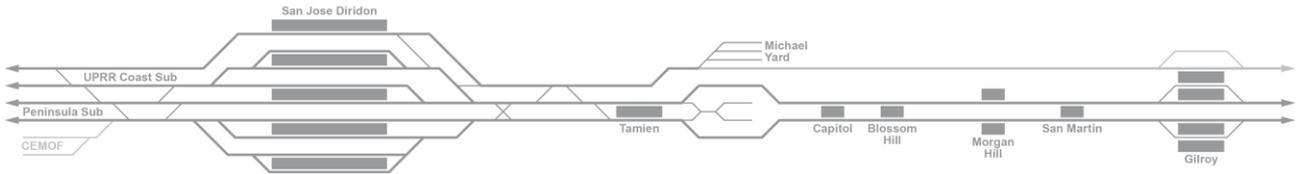
San Jose Terminal Area

1. Existing



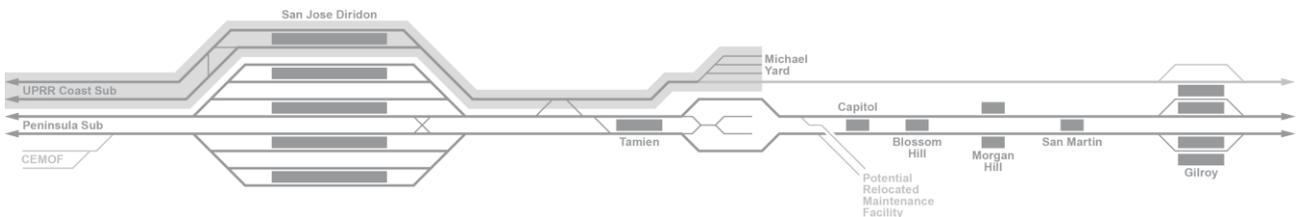
San Jose Terminal Area

2. HSR-PEPD



San Jose Terminal Area

3. HSR-PEPD + Generalized Initial Diridon Integrated Station Concept Plan (DISC) Concepts

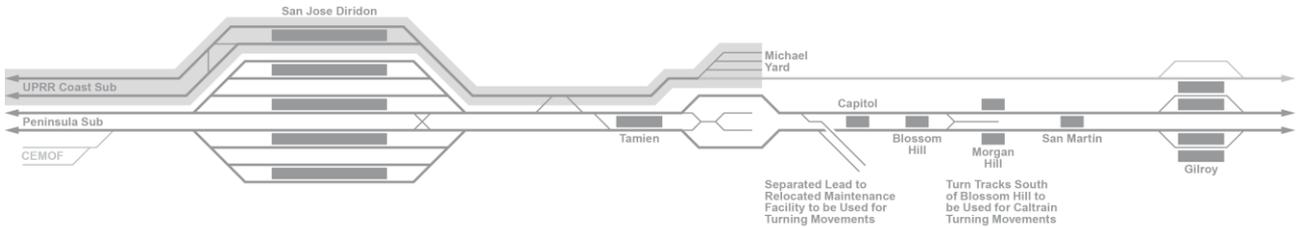


■ UPRR and Diesel Passenger Service Tracks (Analysis Ongoing through DISC Process)



San Jose Terminal Area

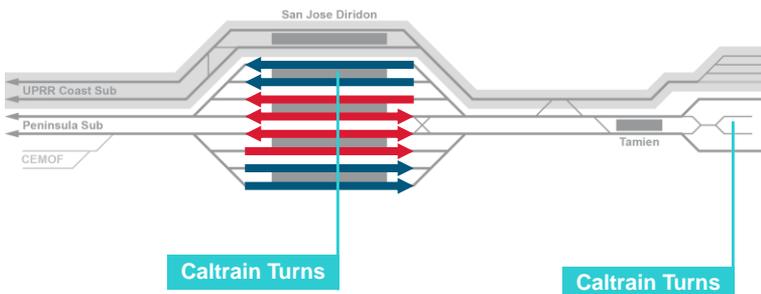
4. HSR-PEPD + DISC Concepts + Potential Additional Infrastructure



■ UPRR and Diesel Passenger Service Tracks (Analysis Ongoing through DISC Process)



SJ Terminal: Baseline Growth



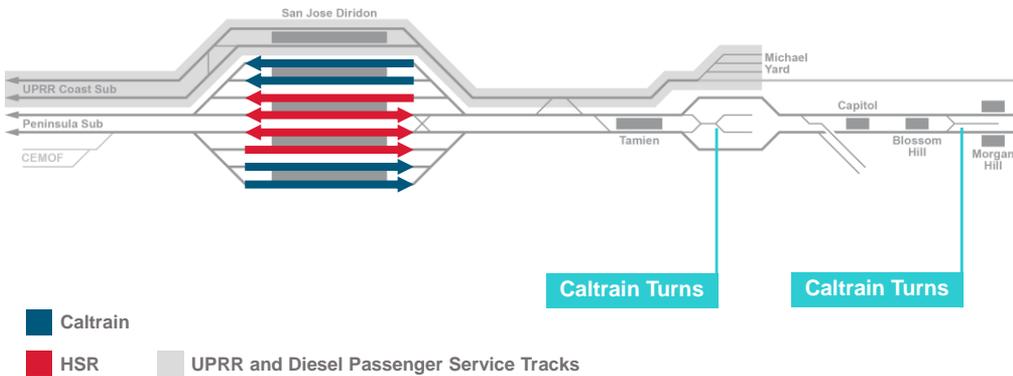
■ Caltrain
 ■ HSR
 ■ UPRR and Diesel Passenger Service Tracks

Scenario generally works within infrastructure currently contemplated with some level of operational risk that will be tested with simulation in next round of Business Plan

Operational challenges result from turning six Caltrain and three HSR trains in the Diridon/Tamien area. Possible mitigations for operational risk in the Baseline include additional interlocking infrastructure and/or adjustment to turn locations for HSR in San Jose.



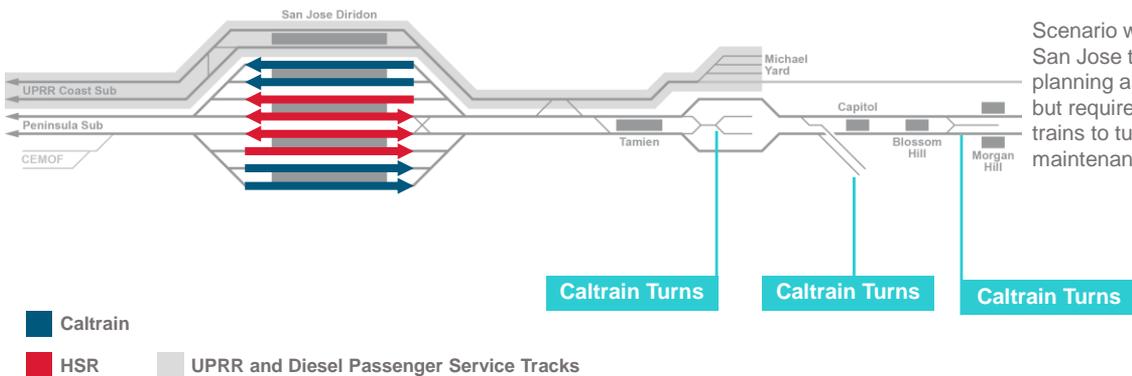
SJ Terminal: Moderate Growth



Operating all Caltrain through Diridon and turning a maximum of four trains at Tamien broadly works in currently contemplated infrastructure in PEPD and assumed changes at Diridon contemplated in DISC analysis



SJ Terminal: High Growth



Scenario works with San Jose terminal planning assumptions, but requires some trains to turn at new maintenance facility





Next Steps

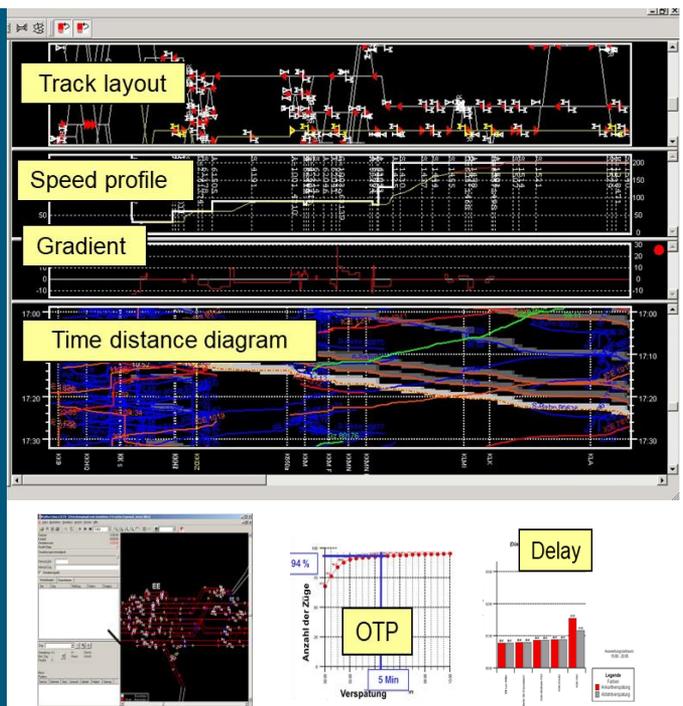


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Next Steps: Simulation

Process

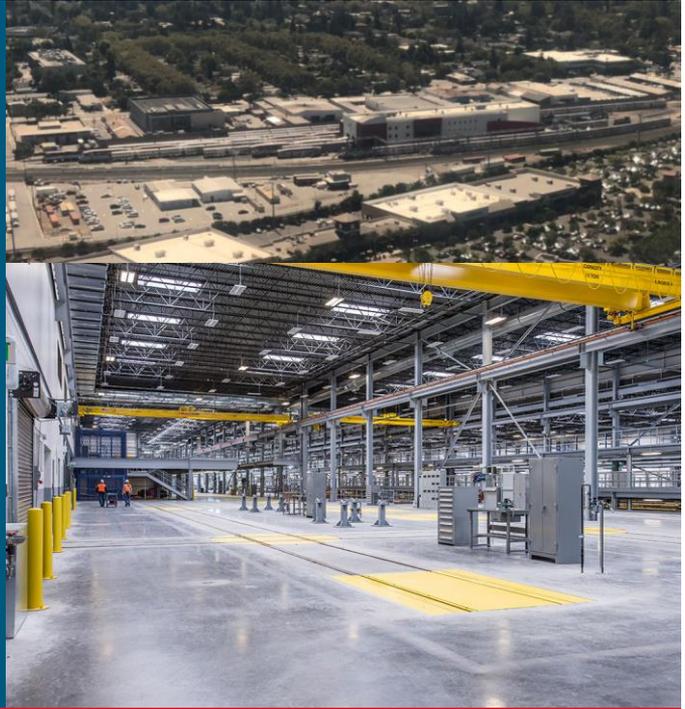
- The primary objective for the simulation analysis is to determine whether the simulation model indicates a stable rush-hour operation absent any major disruptions (e.g. track outages or disabled trains) for the three growth scenarios subject to analysis
- Of particular concern is the extent to which the variability of dwells at intermediate stations will affect the ability to deliver the proposed timetables within reasonable on-time performance parameters



Next Steps: Storage & Maintenance Analysis

Process

- Analyze fleet, storage and maintenance needs associated with the fleet requirements for each of the growth scenarios considered
- Understand when and where new investments in storage and maintenance facilities may be required and analyze how these may impact or benefit overall system operations



Next Steps: Explorations

Examples;

- High Growth stopping pattern tradeoffs
- Dumbarton service connection in Redwood City
- East Bay run-through service via second Transbay Tube
- 22nd St Station relocation





Ridership Forecasts



Ridership Context



Existing Ridership

Today, Caltrain serves bidirectional and polycentric ridership demand

- 62,000 daily boardings¹
- 64%-36% NB-SB split during AM peak period
- Half of trips occur outside of San Francisco

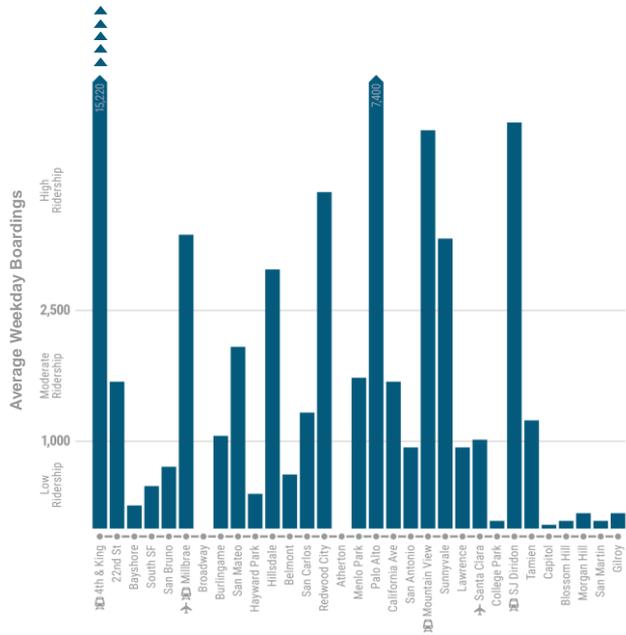
Ridership is highly concentrated around stations with fastest & most frequent Service

- 73% of ridership at 8 Baby Bullet stations served by 4 or more trains per hour, per direction
- There is substantial latent demand, particularly at stations with low service

Train occupancy varies by service type

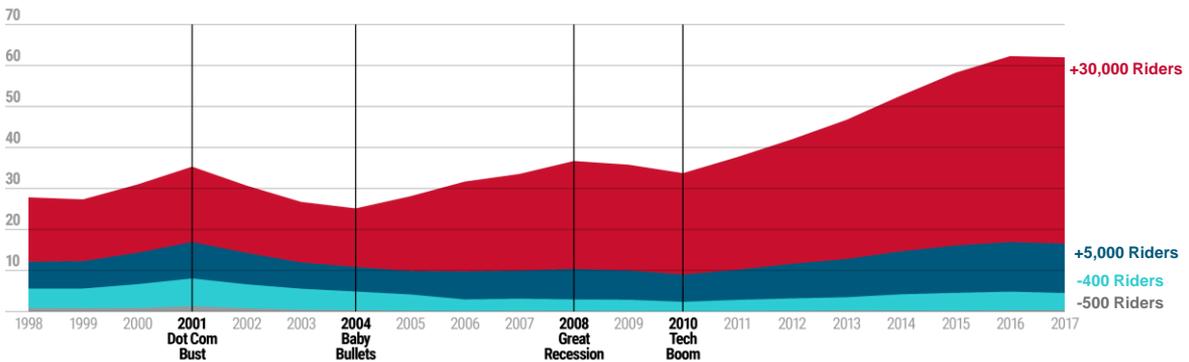
- Many Baby Bullet trains carry 100%-140% of their seated capacity during peak periods, while limited trains vary from about 50% to 120% of seated capacity

¹Based on 2017 ridership data



Ridership Growth Over Time

Change in Ridership (Thousands)
1998 – 2017



Top 8 Stations

4th & King, Millbrae, Hillsdale, Redwood City, Palo Alto, Mountain View, Sunnyvale, San Jose Diridon

Middle 8 Stations

22nd Street, Burlingame, San Mateo, San Carlos, Menlo Park, California Ave, Santa Clara, Tamien

Bottom 8 Stations

Bayshore, South San Francisco, San Bruno, Hayward Park, Belmont, San Antonio, Lawrence, College Park

Gilroy Service

Capitol, Blossom Hill, Morgan Hill, San Martin, Gilroy



Source: 1998-2017 Passenger Counts

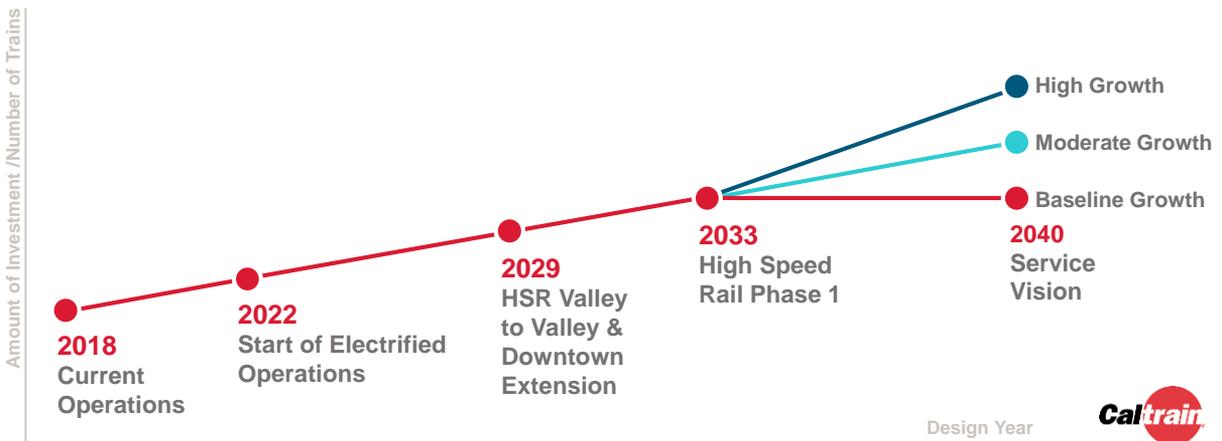


Ridership Forecasts



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2040 Service Scenarios



Objectives

Update the Caltrain Ridership Model to forecast changes associated with Growth Scenarios

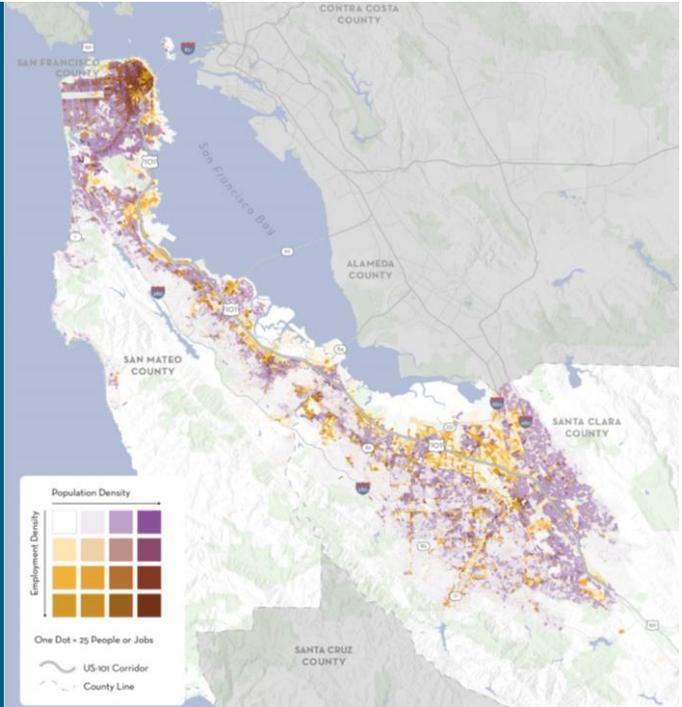
- System, station, and origin-destination forecasts
- Weekday and weekend forecasts
- Breakdown by time period for weekdays (AM peak, midday, PM peak, and evening)

Incorporate sensitivity to regional and local factors influencing ridership

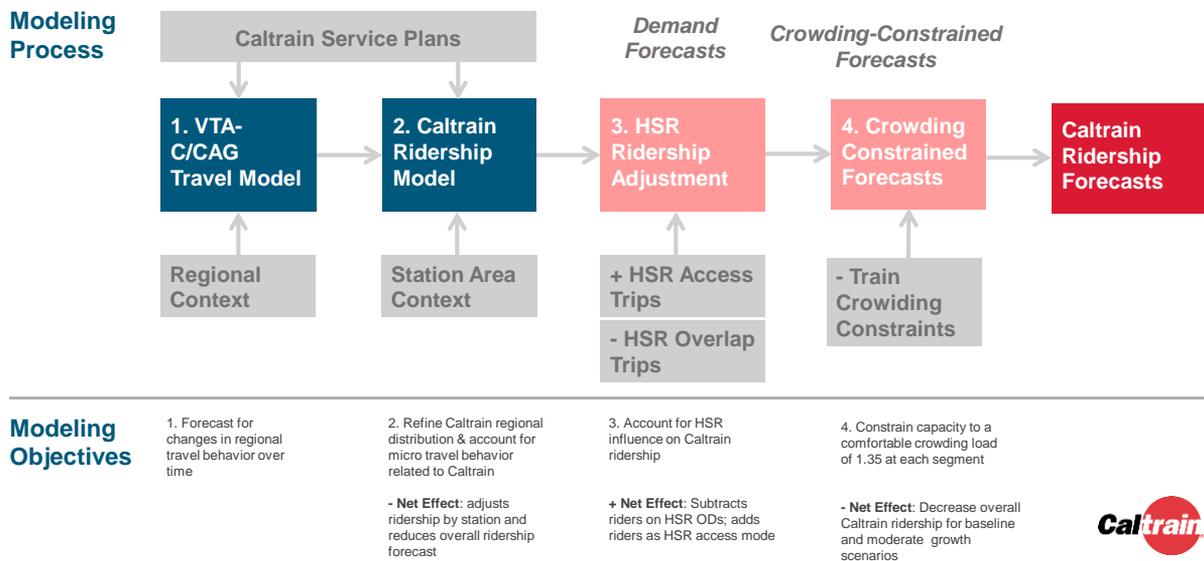
- Regional transportation changes
- Station area land use
- Differentiated service patterns
- Socioeconomic characteristics

Understand implications of train crowding

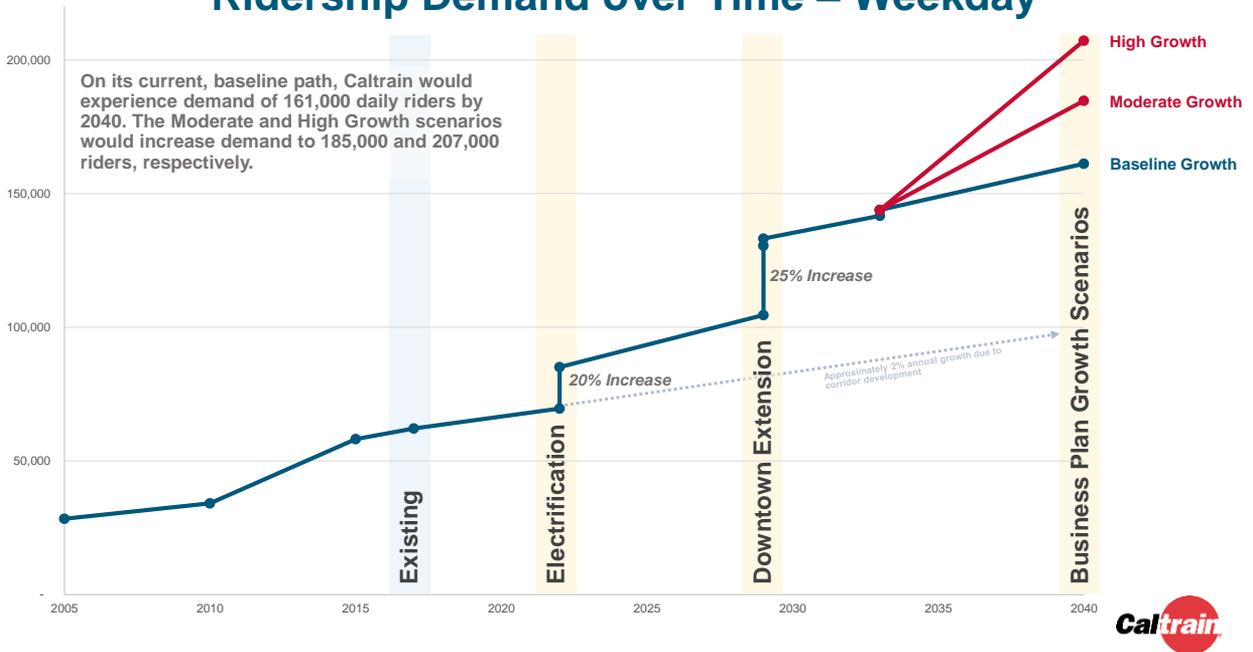
- Align ridership against capacity provided
- Consider extent to which service will be able to fully “capture” market given potential train crowding



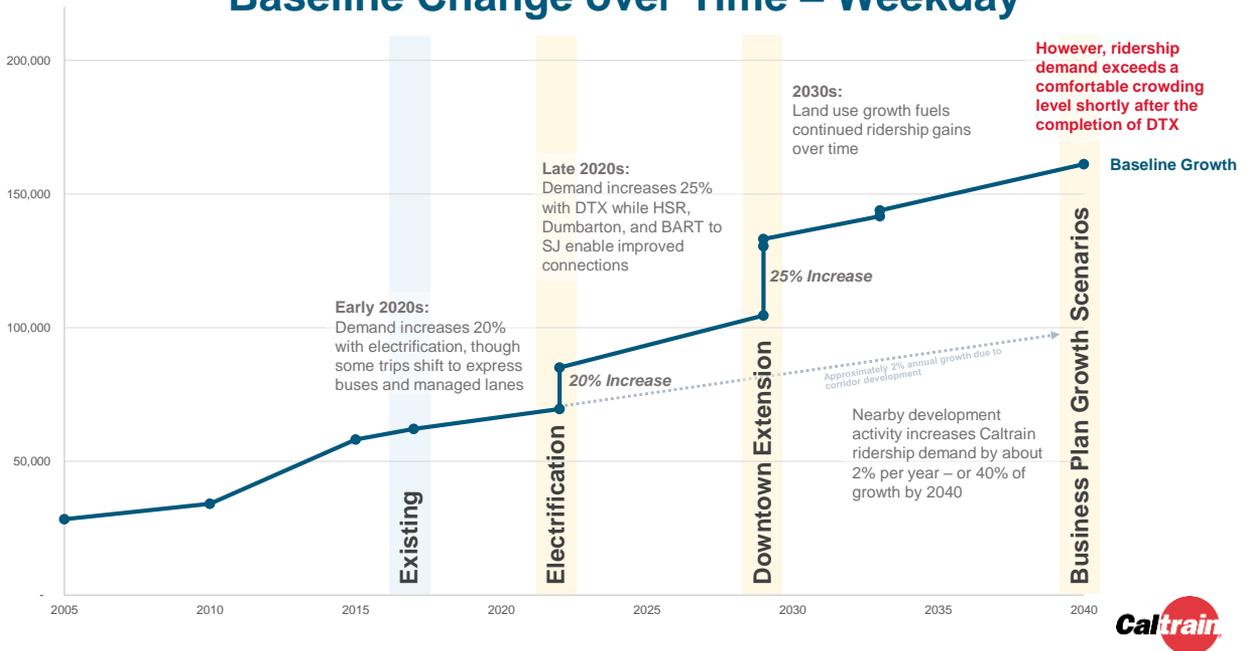
Ridership Model Structure



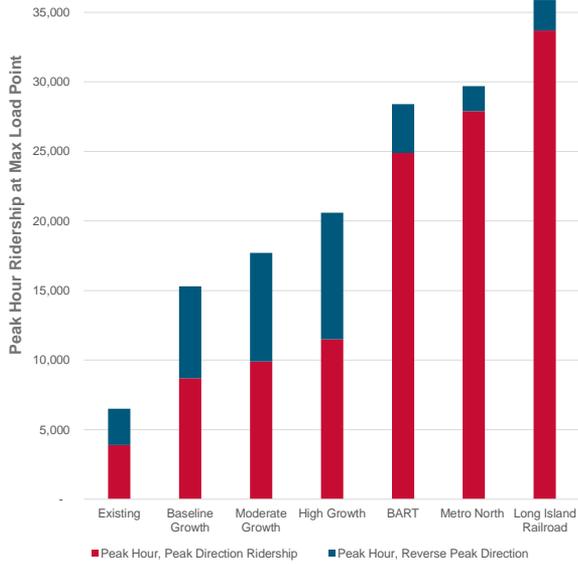
Ridership Demand over Time – Weekday



Baseline Change over Time – Weekday



Peer Comparison: Ridership Demand

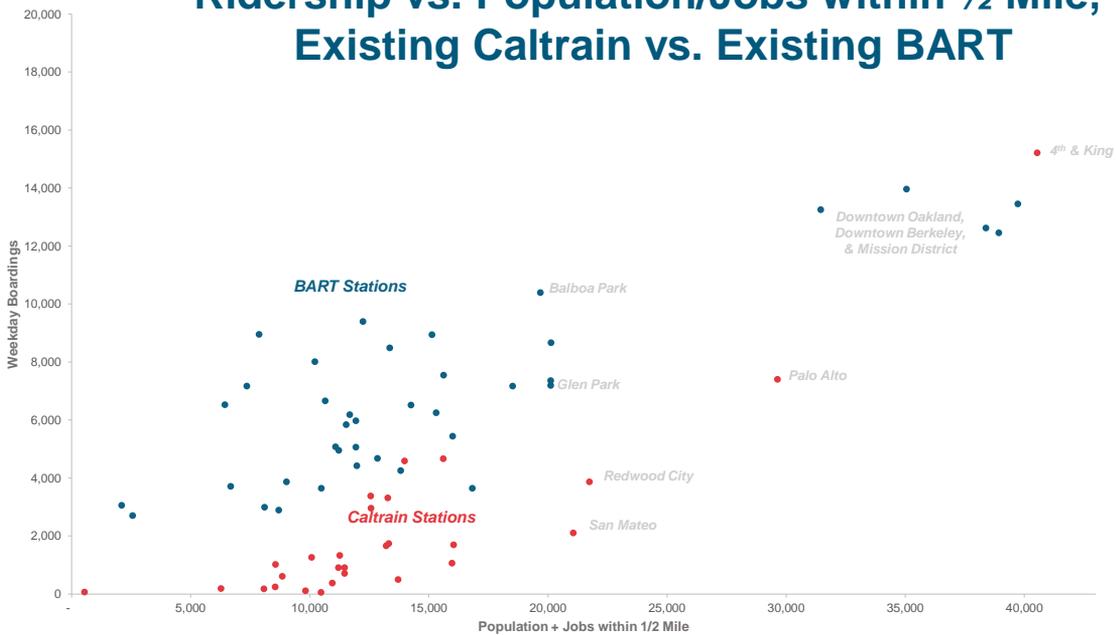


Caltrain's 2040 ridership demand is more balanced (directionally and geographically) than peer corridors

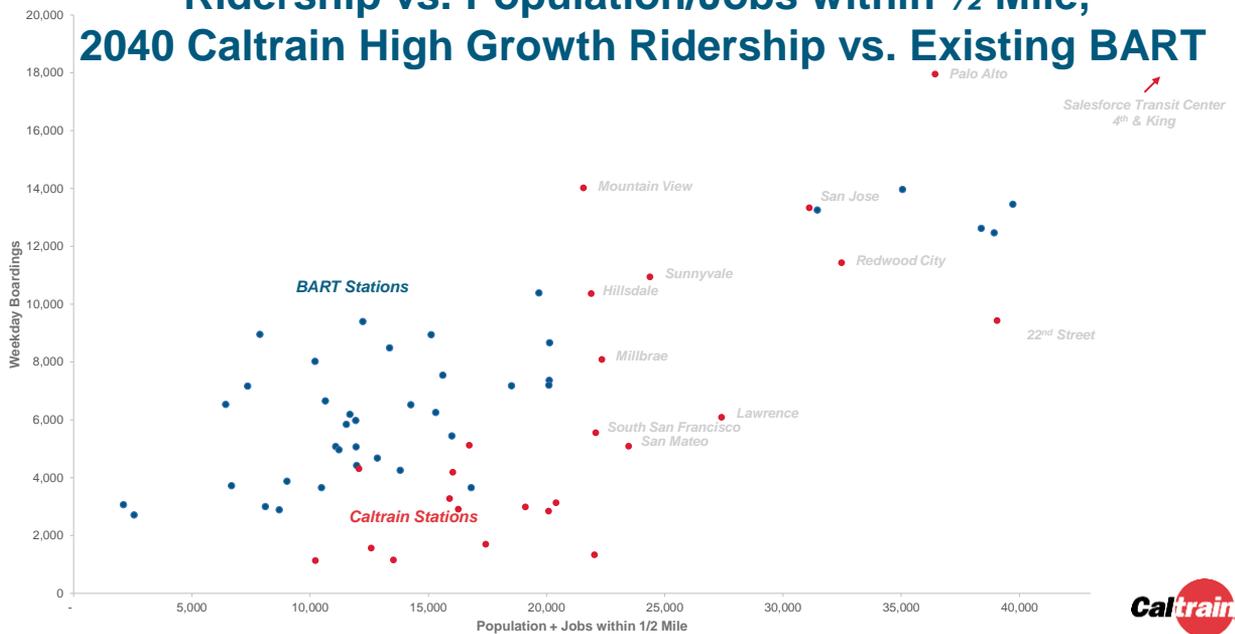
System	Daily	Peak Hour, Max Load Point	Peak % - Reverse Peak %	Peak Hour, Peak Direction Max Load Point
Existing	62,000	6,500	60% - 40%	3,900
Caltrain	2040 Baseline*	161,000*	57% - 43%*	8,700
	2040 Moderate	185,000*	56% - 44%*	9,900
	2040 High	207,000	56% - 44%	11,500
BART (All Lines)	414,000	28,400	88% - 12%	24,900
Metro North (Harlem & New Haven Lines)	176,000	27,900	94% - 6%	26,200
Long Island Railroad (All Lines)	350,000	35,900	94% - 6%	33,700

*Excludes capacity constraining for Baseline and Moderate

Ridership vs. Population/Jobs within 1/2 Mile, Existing Caltrain vs. Existing BART



Ridership vs. Population/Jobs within ½ Mile, 2040 Caltrain High Growth Ridership vs. Existing BART



Key Findings

1. Ridership demand could exceed 200,000 riders by 2040

- Under the Baseline Growth condition, Caltrain would attract 161,000 riders by 2040
- Increasing to 8 TPH would increase ridership to 185,000 for the Moderate Growth scenario
- Increasing to 12 TPH would increase ridership to 207,000 for the High Growth scenario

2. PCEP will provide near-term crowding relief, but growing demand will lead to overcrowded conditions during peak hours upon completion of DTX around 2029

- Caltrain could reach 100,000 riders over the next decade with electrification and land use growth alone
- The Completion of DTX increases Caltrain ridership demand by about 25 percent (27,000 riders)
- While new trains will enable better standing conditions for passengers, the level of crowding expected will be uncomfortable and may not be a competitive option for choice riders

3. By 2040 the Baseline and Moderate Growth scenarios face crowding challenges, while the High Growth does not.

- By 2040 the Baseline and Moderate Growth scenarios exceed a comfortable crowding condition by about 30 to 40 percent for peak hour, peak direction travel.

DTX & Intra-San Francisco Ridership

1. STC Surcharge

- i. Assumed average surcharge of \$2.50 (or \$3 in 2029 dollars) per trip, roughly equivalent to a separate fare zone
- ii. STC would serve about 25,000 daily boardings, but some potential riders may shift to other modes
- iii. Ultimate surcharge amount and mechanism will influence ridership outcomes at STC

2. Location of 22nd Street Station

- i. Ridership forecasts suggest 6,000-10,000 daily station boardings by 2040, but may be higher or lower depending on potential station relocation

3. Intra-SF Ridership

- i. With opening of DTX Caltrain could offer substantial time savings for intra-SF trips and as connection to BART, Transbay buses, and ferries
- ii. Ridership forecasts suggest 4,000-7,000 trips, but could be 20,000-30,000 if similar to BART

Origin-Destination Pair	Estimated Travel Time (& Frequency by Growth Scenario)	
	<i>Muni</i>	<i>Caltrain</i>
4 th & King – STC/Montgomery Station	15 minutes (6 trains per hour)	4 minutes (6-8 trains per hour)
22 nd Street – STC/Montgomery Station	25 minutes (6 trains per hour)	8 minutes (4-8 trains per hour)
Bayshore – STC/Montgomery Station	37 minutes (8 buses per hour)	13 minutes (2-4 trains per hour)

South of Tamien Ridership

Topic	Daily Boardings			
	<i>Existing</i>	<i>2040 Baseline</i>	<i>2040 Moderate</i>	<i>2040 High</i>
Capitol & Blossom Hill	300	700	3,500	4,300
Morgan Hill & Gilroy	400	600	1,300	1,600

**Excludes capacity constraining for Baseline and Moderate*

Findings

- There is reasonably strong demand for service in southern San Jose, where Capitol and Blossom Hill would serve 3,000-4,000 new boardings per day with service every 15 minutes
- There is lower demand in Morgan Hill and Gilroy with half-hourly peak period service and hourly off-peak service
 - Smaller markets with less housing growth
 - HSR is attractive option at Gilroy due to higher frequency service to San Jose and faster travel times to San Francisco and Millbrae



Off-Peak & Weekend Ridership

Topic	Daily Boardings			
	Existing	2040 Baseline	2040 Moderate	2040 High
Off-Peak Boardings (Early AM, Midday, and Evening)	7,300	23,000	34,700	35,900
Weekend Boardings	12,400	43,300	58,800	61,200

Findings

- There is strong potential for growth during off-peak and weekend periods, although there is particularly high uncertainty given data and model limitations
- However, station demand is highly sensitive to service frequency. Demand is highest at stations receiving service every 15 minutes or greater, and lower at stations receiving service every 30 or 60 minutes



2040 Capacity & Crowding



Crowding

How crowded will trains be? Will they still be a competitive choice? Will they be able to serve their full potential market demand?

- The underlying ridership model projects demand based on land use and service levels- it does not take comfort and crowding into account
- If Caltrain is highly crowded and uncomfortable will it still be a competitive mode? Is there a portion of future demand that we may not capture if the trains are uncomfortably full?

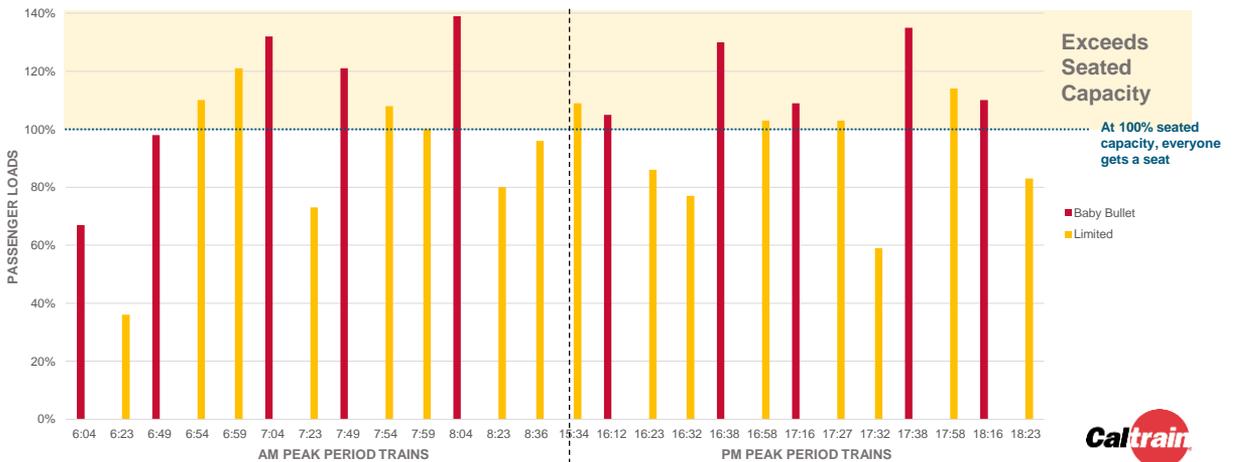
For the purposes of Business Planning, Caltrain is assuming that it can competitively serve passenger loads of up to 135% of seated capacity during regular service. At higher levels of crowding the service may not be competitive for choice riders and Caltrain may not be able to fully capture potential demand



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Context - Crowding

Today, 15 of 28 peak commute direction trains exceed seated capacity during peak periods. Baby Bullet trains are usually beyond their seated capacities (averaging 115%), while Limited trains are typically near capacity (averaging 92%). Max train loads vary from 40% to 140%.

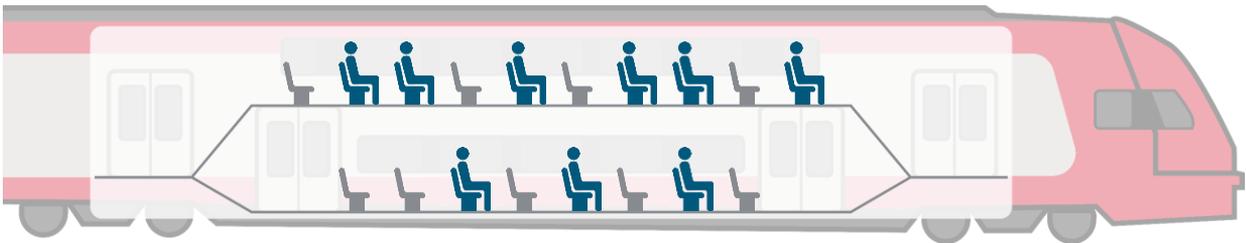


Source: 1998-2017 Passenger Counts



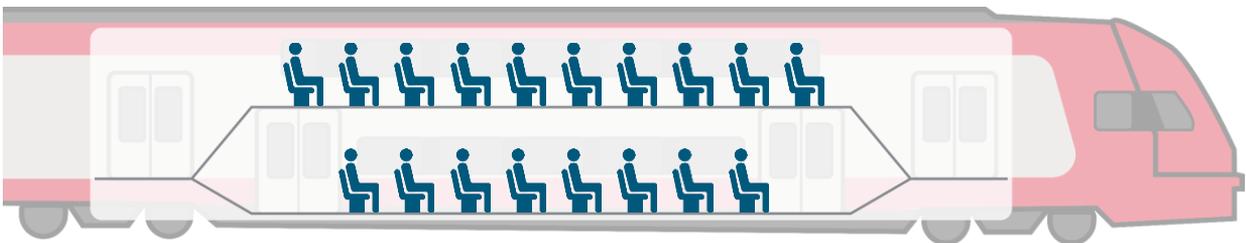
Train Capacity and Crowding

50% Occupancy – Many seats available



Train Capacity and Crowding

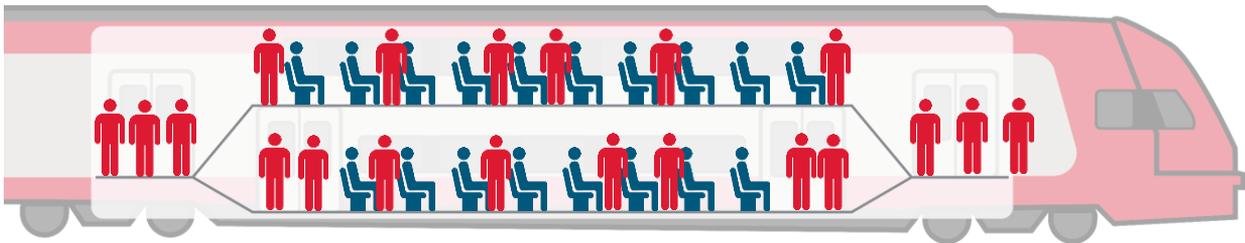
100% Occupancy – Everyone gets a seat



This level of occupancy is the planning standard used for commuter rail by FTA

Train Capacity and Crowding

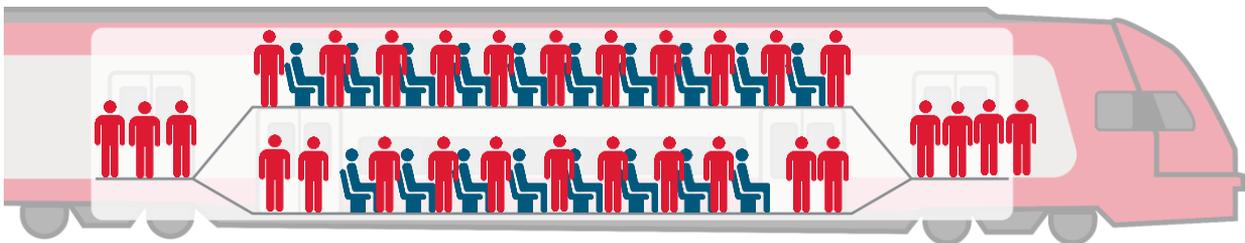
135% Occupancy – Most are seated and everyone else can stand comfortably



This level of occupancy roughly equates to the planning standard used for commuter rail lines into London and on S-Bahn (commuter) trains in Germany. Depending on the specific train design this level of occupancy generally equates to less than two standees per square meter of space

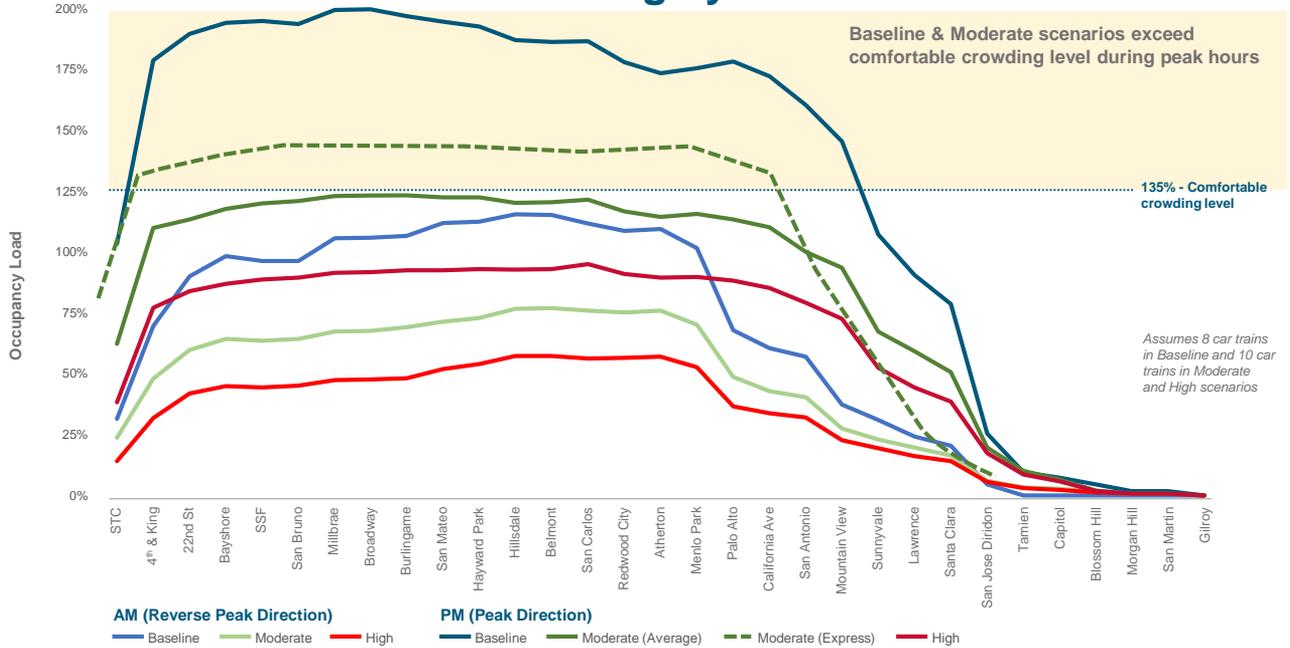
Train Capacity and Crowding

More than 135% Occupancy – Many are standing and may be uncomfortable

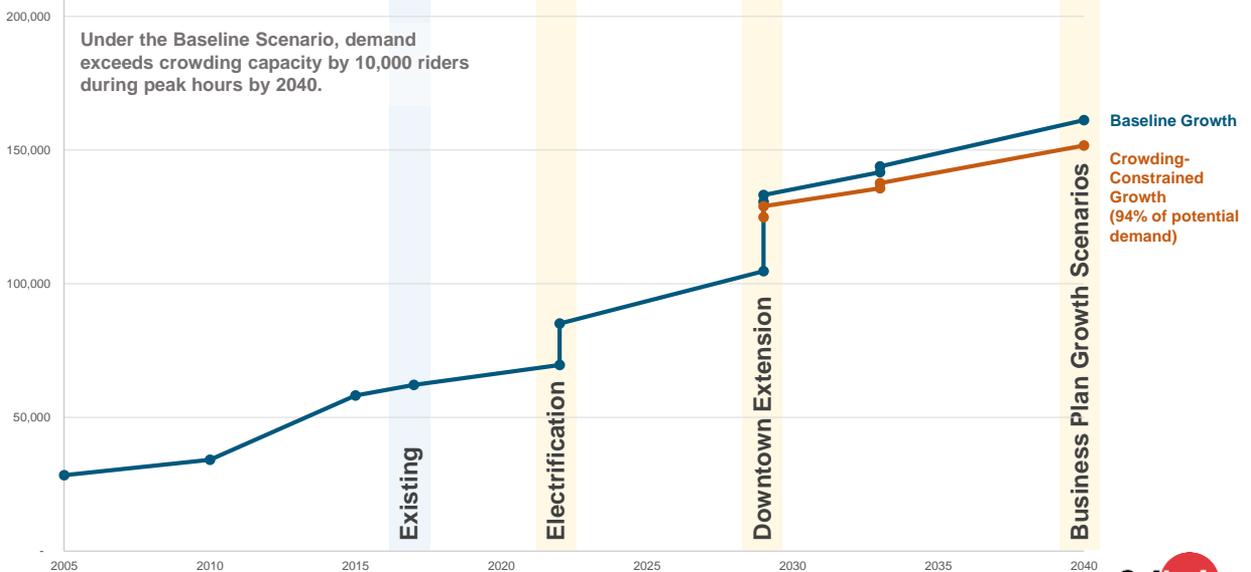


While occupancy loads well over 150% can be safely accommodated, passengers will feel crowded and uncomfortable and the service may not be attractive to choice riders

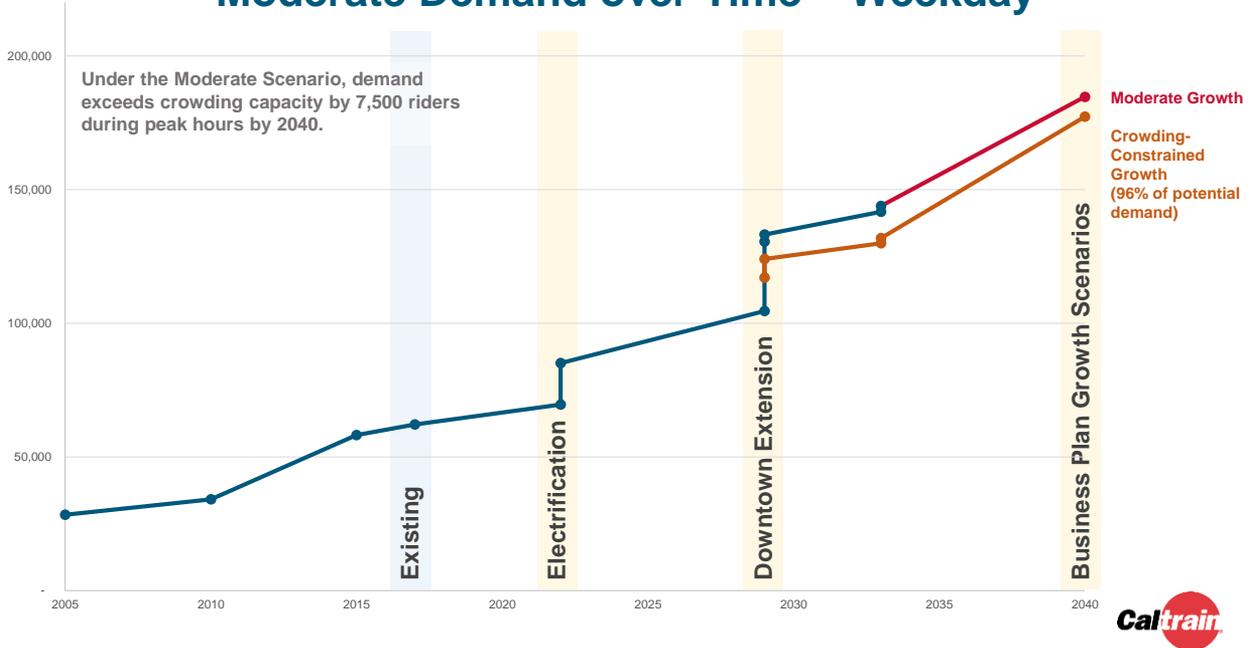
2040 Crowding by Scenario



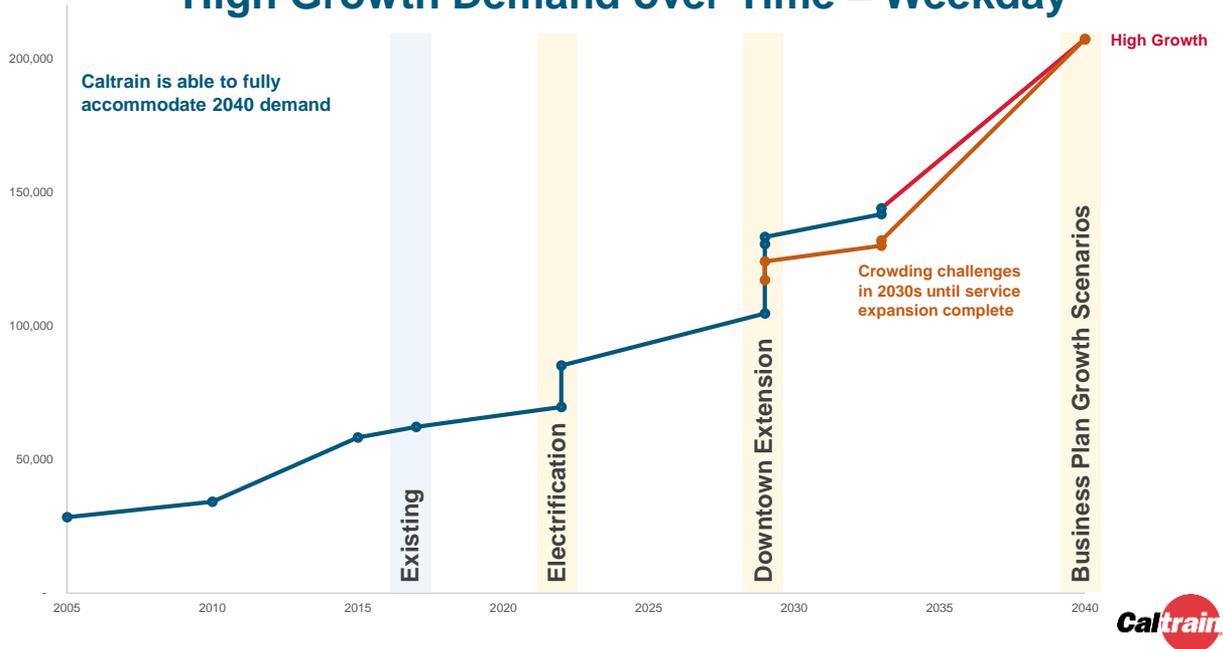
Baseline Demand over Time – Weekday



Moderate Demand over Time – Weekday



High Growth Demand over Time – Weekday

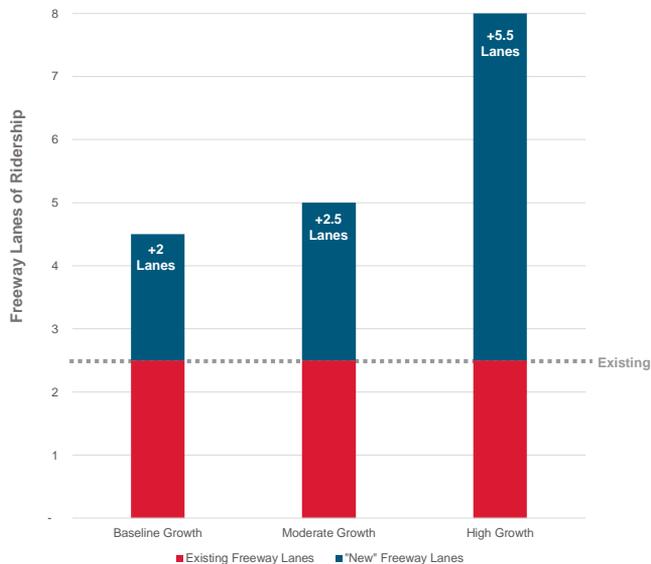


System Forecasts- Constrained for Crowding

Systemwide Boardings: Weekday Ridership

Model Year	Service Plan	Demand	Capacity Constrained	Notes
2017	5 TPH	62,100	62,100	
2022	5 TPH	69,700	69,700	Electrification increases service and capacity. Combined with the Central Subway, significant latent demand is unlocked within the system. After the completion of DTX, peak Caltrain ridership demand would exceed capacity. Ridership continues to grow during shoulder peak and off-peak periods.
	6 TPH	85,000	85,000	
2029	6 TPH	103,100	103,100	
	6 TPH (+ DTX)	130,600	124,900	
	6 TPH (+ DTX and 2 HSR)	132,900	128,900	
2033	6 TPH (+ 2 HSR)	141,700	135,700	
	6 TPH (+ 4 HSR)	143,800	137,600	
2040	Baseline 6 TPH (+ 4 HSR)	161,200	151,700	
2040	Moderate 8 TPH (+ 4 HSR)	184,800	177,200	Demand for express trains would exceed a comfortable crowding level. While local trains could serve some excess capacity, some riders would choose other modes in lieu of a longer local travel time.
2040	High 12 TPH (+ 4 HSR)	207,300	207,300	Sufficient peak capacity and more connected local service serving off-peak and weekend demand.

Rider Throughput as Freeway Lanes



Caltrain's peak load point occurs around the mid-Peninsula. Today, Caltrain serves about 3,900 riders per direction during its busiest hour at this peak load point. This is equivalent to 2.5 lanes of freeway traffic.

The **Baseline Growth Scenario** increases peak hour ridership to about 6,400 riders at the peak load point – equivalent to widening US-101 by 2 lanes. Peak hour demand exceeds capacity by about 40%.

The **Moderate Growth Scenario** increases peak hour ridership to about 7,500 riders at the peak load point – equivalent to widening US-101 by 2.5 lanes. Peak hour demand exceeds effective capacity by about 35% due to higher demand for express trains.

The **High Growth Scenario** increases peak hour ridership to over 11,000 at the peak load point – equivalent to widening US-101 by 5.5 lanes. All ridership demand is served.

Assumes 135% max occupancy load



Next Steps



Next Steps

Upcoming Work & Updates

- Service Planning
 - Explorations and Variations
 - Simulation analysis
- Business Case Development
 - Corridor Investments and Capital Costs
 - Operating Costs and Revenues
 - Mobility and Environmental Benefits
- Community Interface Assessment
 - Grade Separation Update



FOR MORE INFORMATION
WWW.CALTRAIN.COM



2040 Station Demand: Top 12

Weekday Boardings				
Station	Existing	Baseline Growth	Moderate Growth	High Growth
4 th & King	15,200	20,600	23,800	27,300
Salesforce Transit Center	0	21,600	26,800	25,000
Palo Alto	7,400	14,900	15,700	18,000
Mountain View	4,500	11,700	12,700	14,100
San Jose	4,700	11,100	12,000	13,400
Sunnyvale	3,300	7,700	10,000	11,700
Redwood City	3,900	8,300	9,400	11,500
Hillsdale	3,000	8,400	9,000	10,400
22 nd Street	1,700	5,800	7,100	9,500
Millbrae	3,400	8,900	7,900	8,100
Lawrence	900	5,400	4,700	6,100
South San Francisco	500	2,100	5,500	5,600

Notes:

- Excludes capacity constraining.
- San Francisco ridership may vary depending on location of 22nd Street station and Salesforce Transit Center surcharge.
- Future SFCHAMP modeling may better inform intra-SF ridership demand.



2040 Station Demand: Largest Gains

Weekday Boardings – 2040 High Growth vs. Existing				
Station	Existing	2040 High Growth	Change	% Change
Capitol	55	1,700	1,600	2,909%
Blossom Hill	107	2,600	2,500	2,336%
Bayshore	240	3,200	3,000	1,250%
South San Francisco	496	5,600	5,100	1,028%
Hayward Park	376	2,900	2,500	665%
Lawrence	907	6,100	5,200	573%
22nd St	1,687	9,500	7,800	462%
Morgan Hill	181	900	700	387%
Gilroy	173	700	600	347%
Tamien	1,264	5,100	3,900	309%
Hillsdale	2,963	10,400	7,500	253%
San Antonio	904	3,000	2,100	232%

Notes:

- Excludes Salesforce Transit Center.
- 22nd Street Station ridership may vary depending on station location and Salesforce Transit Center surcharge.



2040 County to County Demand

Daily County to County Ridership Demand				
County OD Pair	Existing	Baseline Growth	Moderate Growth	High Growth
San Francisco-San Mateo	11,500	36,500	37,200	37,700
San Francisco-Santa Clara	22,600	57,400	71,200	74,800
San Mateo-Santa Clara	15,800	29,700	35,500	46,400
Within San Francisco	100	4,400	7,000	7,100
Within San Mateo	4,900	13,300	11,900	16,000
Within Santa Clara	7,200	19,900	21,900	24,500

Notes:

- Excludes capacity constraining.
- Future SFCHAMP modeling may better inform intra-SF ridership demand and implications of STC fare surcharge.
- Southern Santa Clara County stations account for 1,300 riders in Baseline Scenario, 4,800 in Moderate Scenario, and 5,900 in High Scenario
- HSR, Dumbarton Rail, and BART to San Jose each account for an increase of about 1,000-2,000 daily trips over existing.



2040 Station OD Demand

Top 5 Station OD Pairs, Including Downtown San Francisco

Station-Station OD Pair	Existing	Baseline Growth	Moderate	High Growth
STC/4 th & King-Palo Alto	4,300	9,100	12,300	12,300
STC/4 th & King-Mountain View	4,100	8,100	9,300	9,200
STC/4 th & King-Sunnyvale	3,700	6,900	8,400	8,600
STC/4 th & King-San Jose	3,700	5,000	5,900	6,500
STC/4 th & King-Lawrence	500	4,600	4,700	5,200

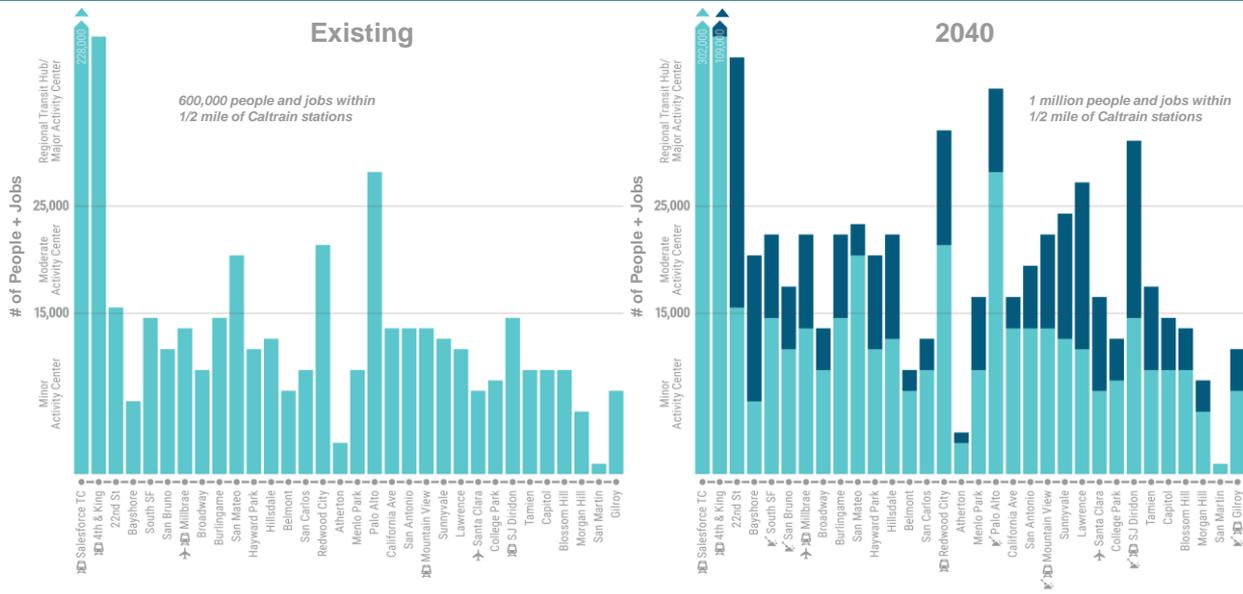
Top 5 Station OD Pairs, Excluding Downtown San Francisco

Station-Station OD Pair	Existing	Baseline Growth	Moderate	High Growth
San Jose-Palo Alto	1,500	4,200	3,600	3,500
San Jose-Mountain View	400	2,900	3,600	3,300
Redwood City-Palo Alto	600	2,200	2,000	3,100
22 nd Street-Palo Alto	1,400	1,700	2,000	2,600
Redwood City-Hillsdale	300	1,500	2,100	2,400

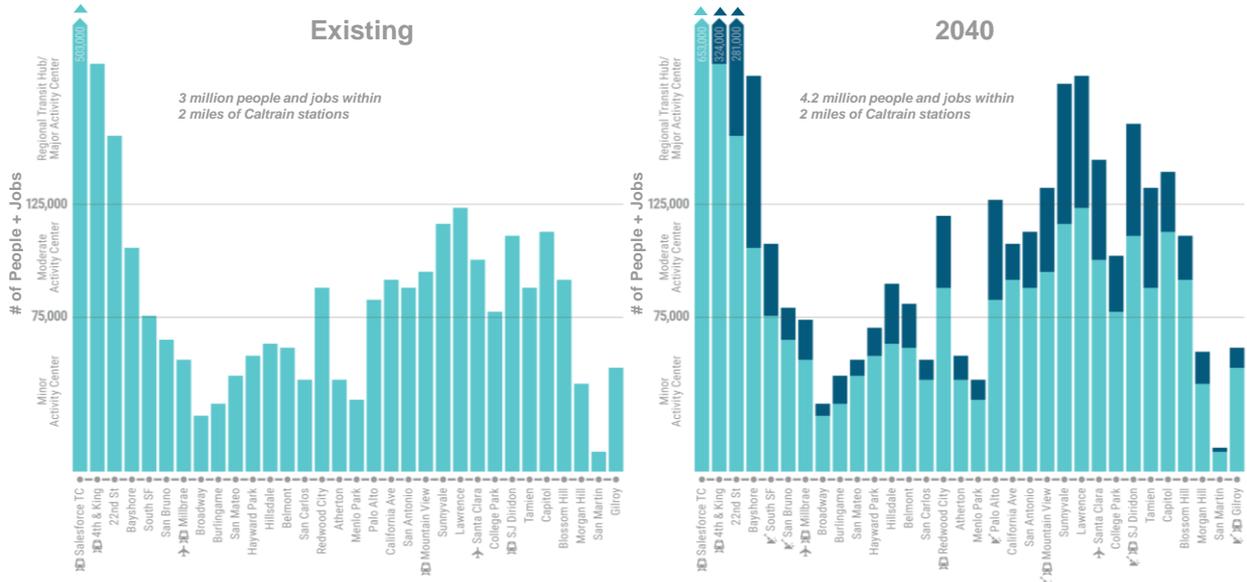
Excludes capacity constraining



Land Use/Transportation Context: 1/2-Mile Area



Land Use/Transportation Context: 2-Mile Area



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



Memorandum

Date: March 28, 2019

To: CalMod Local Policy Maker Group (LPMG)

From: John Funghi, CalMod Chief Officer; Casey Fromson, Gov. Affairs Director

Re: Caltrain Electrification Project E-Update

CALMOD RELEASES SAFETY VIDEO

As Caltrain outfits 51 miles of the corridor with electric overhead wires between San Francisco 4th and King Station and San Jose Tamien Station, outreach staff has launched a safety campaign to ensure riders are aware and informed. The electrification will eliminate diesel emissions and a result in cleaner air along the Caltrain corridor. Staying safe around these new electric overhead wires is vital, so Caltrain staff has developed a safety video featuring a few easy ways to stay safe.



To watch the video, visit <https://www.youtube.com/watch?v=RX52I5EU3mA>.

ELECTRIFICATION INFRASTRUCTURE UPDATE

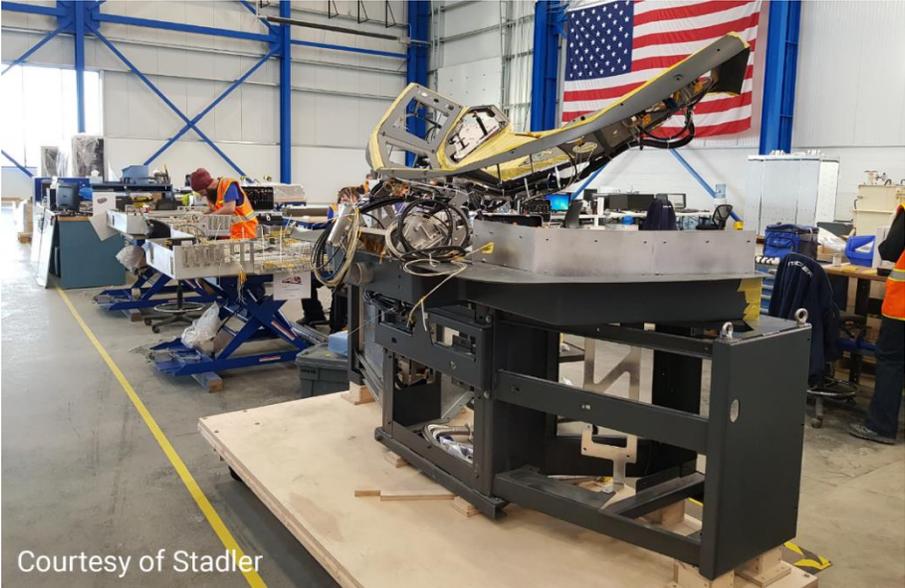
This month, crews continued foundation installation from South San Francisco to Menlo Park and pole installation from South San Francisco to San Mateo. Five traction power facilities are currently under construction in South San Francisco, San Jose, Redwood City and San Mateo.



To sign up for weekly construction updates or for more construction information, visit CalMod.org/Construction.

ELECTRIC VEHICLE UPDATE

Interior equipment installation is now occurring in 7 of the car shells! Trainset #1 is well underway, as first article inspections continue.



Courtesy of Stadler

View more pictures at www.CalMod.org/Gallery.

In case you missed it, check out our [Electric Train Manufacturing Video](#) from February, and see the upper level floors taking shape.

PUBLIC MEETINGS

Caltrain Board Meeting – April 4, 2019 at 10:00 a.m.

For more details, and a full list of upcoming meetings, please visit CalMod.org/events.

DETAILED PROGRESS REPORT

- [January 2019 Monthly Progress Report](#) presented to Caltrain Board on March 7, 2019



Memorandum

Date: March 28, 2019
To: Local Policy Maker Group (LPMG)
From: Boris Lipkin, Northern California Regional Director
Re: California High-Speed Rail Program Update

STATEWIDE UPDATE

Over the past month, the high-speed rail program has continued to be in the headlines. On March 4, 2019, CEO Brian Kelly responded to the Federal Railroad Administration's (FRA) February letter threatening to cancel our grant agreements and issued the below statement.

CEO Brian Kelly's Statement on the Federal Railroad Administration Letter

Today [March 4, 2019], I sent a response to the Federal Railroad Administration (FRA) Administrator Ron Batory's February 19, 2019, letter threatening to take back federal funds directed to the nation's first truly high-speed rail project. I informed Administrator Batory that withdrawing federal funds from this project is unwarranted, unprecedented and harmful to the people and the economy of the Central Valley, California and the nation.

The threat to de-obligate these funds ignores the steady progress made on the project that now has 24 active or completed construction sites, employs some 2,600 workers in the Central Valley, and includes the participation of some 488 small businesses, including 15 from outside California. I informed Administrator Batory that the Authority has met our obligations under our federal grant agreements to date and encouraged him to reject the harmful act of withdrawing federal funds from the project. Instead, I urged him to follow a more constructive path: join me in restoring a functional relationship between our agencies and engage in a structured process to share information, review project risks and resolve all issues to move forward on the project together.

Our mutual goal should be the successful delivery of America's first truly high-speed rail service.

Here is a link to Mr. Kelly's response letter to Ronald Batory, FRA (summary):

http://www.hsr.ca.gov/docs/newsroom/2019_Batory_030419.pdf

Here is a link to Mr. Kelly's response letter to Jamie Rennert, FRA (full):

http://www.hsr.ca.gov/docs/newsroom/2019_Rennert_030419.pdf

We are awaiting a response from the FRA.

Construction Update

Construction activities continue in the Central Valley with significant progress in constructing both a high-speed rail crossing over Garces Highway near Wasco and a viaduct over the San Joaquin River north of Fresno. These activities, along with other, ongoing activities in

Construction Packages 1-4, has resulted in a total of 2,632 construction workers being dispatched to the job site.

Follow all construction updates at https://buildhsr.com/construction_update/

NORTHERN CALIFORNIA UPDATE

Community Working Group Meetings

In February and March, the Authority hosted five Community Working Group (CWG) meetings across the Northern California region. Meeting topics included a discussion of the rationale and process for identifying a preferred alternative, which will be presented to the Authority Board in September 2019 for both project sections in Northern California. Additionally, a presentation by the Early Train Operator (Deutsche Bahn [DB]) and an outreach update were provided to working group members.

Please see the attached Key Themes for a brief overview of the feedback heard at each of the five meetings. Additional meeting materials have been posted on the Authority's website. Go to *Community Meetings* under the respective project section links below.

[San Francisco to San Jose Project Section](#)

[San Jose to Merced Project Section](#)

Environmental Justice Outreach

In March, the Authority's Outreach Team participated in meetings with communities identified as having higher concentrations of environmental justice (EJ) populations and service providers along the San Francisco to San Jose and San Jose to Merced Project Sections to generate neighborhood-specific, place-based insights. The team presented to the Vietnamese Voluntary Foundation in San Jose and met with the Visitation Valley Service Providers Collaborative.

Next steps for EJ outreach will include: in-language materials and meetings; continue follow up with community members; service provider and small groups meetings.

RECENT AND UPCOMING OUTREACH ACTIVITIES

- March 5: Morgan Hill-Gilroy Community Working Group
- March 6: Santa Clara County Vietnamese Community Meeting
- March 7: Visitation Valley Service Providers Collaborative Meeting
- March 12: San Mateo County Community Working Group
- March 14: South Peninsula Community Working Group
- March 18: San Francisco Community Working Group
- March 26: TEAM-C Meeting
- March 26: LifeMoves Homeless Walk (San Mateo)
- March 28: LifeMoves Homeless Walk (Redwood City)
- March 29: Gilroy Mobility Partnership
- April 4: LifeMoves Homeless Walk (South San Francisco)
- April 25: North Fair Oaks Community Meeting



NORTHERN CALIFORNIA REGION COMMUNITY WORKING GROUP MEETINGS KEY THEMES WINTER 2019

San Jose Community Working Group – February 22, 2019

- Request for additional outreach in the Monterey Corridor
- Interest in the role of the Early Train Operator (ETO) and global expertise
- Clarification on Preferred Alternative (PA) criteria, identification process, and opportunities for public comment
- Interaction between Diridon Integrated Station Concept Plan and High-Speed Rail (HSR) EIR

Morgan Hill – Gilroy Community Working Group – March 5, 2019

- Request for time for conversation amongst members on input into the PA
- Project costs and schedule
- Status of federal funding
- ETO roles and responsibilities
- Clarification on PA criteria, identification process, and working group input

San Mateo County Community Working Group – March 12, 2019

- Funding sources, including status of federal funding
- Project costs and schedule
- How the differentiating factors are weighted and considered in identifying a PA
- ETO roles and responsibilities
- Design and procurement process of rolling stock

South Peninsula Community Working Group – March 14, 2019

- Authority's coordination with local rail and infrastructure projects
- Ridership projections
- Potential reformatting of group to improve attendance
- ETO roles and responsibilities

San Francisco Community Working Group – March 18, 2019

- Caltrain electrification funding and status
- Distinction between the Downtown Extension EIR and the HSR EIR
- Status of federal funding
- Stipulations of franchise agreements with future private concessionaire

NORTHERN CALIFORNIA REGION

Local Policy Maker Group

Morgan Galli, Northern California Regional Stakeholder Manager

March 28, 2019



STATEWIDE UPDATE

NORTHERN CALIFORNIA OUTREACH UPDATE

NORTHERN CALIFORNIA REGION WINTER 2019 COMMUNITY WORKING GROUPS

Meetings

San Jose

February 21

Morgan Hill-Gilroy

March 5

San Mateo County

March 12

South Peninsula

March 14

San Francisco

March 18

Participation to Date

- 21 CWG members
- 20 members of the public
- 9 CWG members
- 15 members of the public
- 10 CWG members
- 8 members of the public
- 1 CWG members
- 4 members of the public
- 5 CWG members
- 5 members of the public

Statewide

NorCal Update

EJ Outreach

NORTHERN CALIFORNIA COMMUNITY WORKING GROUPS **KEY THEMES**

Winter 2019

EARLY TRAIN OPERATOR

- Role and Scope of Work
- Business Transfer Model and Stipulations
- Interest in DB Group's Global Expertise

OUTREACH

- Continued neighborhood-specific outreach
- Ongoing working group collaboration
- Community feedback on Preferred Alternative

ENVIRONMENTAL PROCESS

- Preferred Alternative criteria and schedule
- Relationship to local planning (DISC, Caltrain Business Plan, DTX)
- Project costs and status of federal funding needed to complete environmental document



Statewide

NorCal Update

EJ Outreach

SANTA CLARA COUNTY VIETNAMESE COMMUNITY MEETING

Key Themes – March 6, 2019

- Excitement for connecting Vietnamese communities across the state.
- Project timeline and initiation of operations.
- San Jose – Merced Project Section Range of Alternatives.
- Air quality, safety, traffic, and noise.
- Fair and responsible labor practices of contractors.
- Benefits and impacts to disadvantaged communities.



Statewide

NorCal Update

EJ Outreach

VISITACION VALLEY SERVICE PROVIDERS COLLABORATIVE MEETING

7

Key Themes – March 7, 2019

- Air quality, safety, quality of life, and noise effects associated with construction and operations of light maintenance facility.
- Community benefits to offset impacts, including jobs and job training for local residents, green and open space, improved lighting around the tracks.
- Appreciated early engagement with the community and interested in ongoing engagement and updates on the project.

Statewide

NorCal Update

EJ Outreach

NORTHERN CALIFORNIA COMMUNITY OUTREACH

8

Next Steps

- Community Engagement Activities:
 - Homeless Community Walks:
3/26 (San Mateo), 3/28 (Redwood City), 4/4 (South San Francisco)
 - North Fair Oaks (Spanish)
 - Gardner Neighborhood (Spanish)
- Ongoing: Service provider meetings and small groups
- Ongoing: Informational tabling and sharing at community events

Statewide

NorCal Update

EJ Outreach

THANK YOU & HOW TO STAY INVOLVED

HELPLINE 1-800-435-8670

WEBSITE www.hsr.ca.gov

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