City of Palo Alto (ID # 10649)

City Council Staff Report

Report Type: Action Items **Meeting Date: 9/16/2019**

Council Priority: Grade Separations

Summary Title: Recommendation to Comment on the Caltrain Business Plan Long Range Service Vision

Title: Caltrain Business Plan - Direction to Staff Regarding Comments on Draft Long Range Service Vision

From: City Manager

Lead Department: City Manager

Recommendation

Staff recommends Council discussion and direction on submittal of a comment letter in response to Caltrain's staff recommendations for the Caltrain Business Plan and its Long Range Service Vision.

Background

The City Council conducted a study session on the developing Caltrain Business Plan on May 13, 2019 (Report #10335). Since that time, Caltrain staff has released a Draft Recommendation for Caltrain's Long Range Service Vision. The summary report is attached.

Specific recommendations are provided beginning on page 14 of the report, and exerpted here:

CALTRAIN'S LONG RANGE SERVICE VISION – DRAFT LANGUAGE
The following is the specific, draft "Service Vision" language that the JPB would be asked to consider for adoption in October. This language will be reviewed and revised based on input from the Board and comments received through stakeholder and public outreach.

1) Caltrain's Long Range Service Vision directs the railroad to plan for a substantially expanded rail service that will address the local and regional mobility needs of the corridor while supporting local economic development activities. When fully realized, this service will provide;

> *A. A mixture of express and local Caltrain services operated in an evenly spaced, bidirectional pattern*

B. Minimum peak hour frequencies of; • 8 trains per hour per direction on the JPB-owned corridor between Tamien Station in San Jose and San Francisco, extended to Salesforce Transit Center at such time as the Downtown Extension is completed • 4 trains per hour per direction between Blossom Hill and Tamien Stations, subject to the securing of necessary operating rights • 2 trains per hour per direction between and Gilroy and Blossom Hill Stations, subject to the securing of necessary operating rights

C. Off-peak and weekend frequencies of between 2 and 6 trains per hour per direction north of Blossom Hill and hourly between Gilroy and Blossom Hill, with future refinements to be based on realized demand

D. Accommodation of California High Speed Rail trains, in accordance with the terms of existing and future blended system agreements between the JPB and the California High Speed Rail Authority

E. Delivery of these services will occur through the incremental development of corridor projects and infrastructure to be further defined through individual planning process, feasibility studies and community engagement. At this time, such infrastructure is conceptually understood to include;
i. Investments in rail systems including a new, high performance signal system
ii. Station modifications including platform lengthening, level boarding, and investments in station access facilities and amenities to support growing ridership and improve customer experience
iii. New and modified maintenance and storage facilities in the vicinity of both terminals as well as the expansion of the electrified Caltrain fleet
iv. A series of short, 4-track stations and overtakes at various points throughout the corridor
v. Completion of key regional and state partner projects including
1. The Downtown Extension to the Salesforce Transit Center
2. The reconstruction of Diridon Station and surrounding rail infrastructure
3. The reconstruction and electrification of the rail corridor south of Control Point Lick to the Gilroy Station
4. Additional improvements to allow for the operation of High Speed Rail service between Gilroy and San Francisco
5. The substantial grade separation of the corridor as well as safety upgrades to any remaining at-grade crossings, undertaken in a coordinated strategic manner driven by the desires of individual local jurisdictions as well as legal requirements associated with any proposed 4-track segments.

2) Caltrain's Long Range Service Vision further directs the railroad to continue its consideration of a potential "higher" growth level of service in the context of major regional and state rail planning. Specifically, the Long Range Service Vision directs the railroad to;

A. Work with regional and state partners to study and evaluate both the feasibility and desirability of higher levels of service in the context of major regional and state rail initiatives including planning related to the Dumbarton Rail Corridor, the 2nd Transbay Crossing, the potential for expanded ACE and Capitol Corridor services, and ongoing

planning for the California High Speed Rail system.

B. To take certain actions to consider and, where feasible, not preclude such higher levels of service as they specifically relate to; i. The planning of rail terminals and related facilities ii. The sale or permanent encumbrance of JPB land iii. The design of grade separations in areas where 4-track segments may be required iv. The sizing of future maintenance facilities and storage yards

C. To return to the board with a recommendation regarding any formal expansion of the Long Range Service Vision at such a time as clear regional and state policy and funding commitments are in place and the feasibility of such an option on the corridor has been confirmed

3) Finally, Caltrain's Long Range Service Vision directs the railroad to periodically reaffirm the Vision to ensure that it continues to provide relevant and useful guidance to the railroad. Such reaffirmations should occur;

A. At a regular intervals of no less than 5 years

B. In response to significant changes to JPB or partner projects that materially influence the substance of the Long Range Service Vision

In addition to the Summary Memo, Caltrain staff has released a presentation and Organizational Assessment Report. These documents and additional information is available at https://www.caltrain2040.org/long-range-service-vision/. Caltrain staff has indicated they plan to present the Long Range Service Vision to the Joint Powers Board for adoption at its October meeting, potentially on October 3rd.

Discussion

Through discussion at the Caltrain Local Policy Maker Group (LPMG) meetings, it appears clear that while many communities would like to advance grade separation projects, primary interests at this time focus on increased frequency and quality of Caltrain service. This puts Palo Alto in a somewhat unique position of grappling with the complex and difficult issues associated with grade separations ahead of many communities along the Caltrain corridor. Caltrain has to date been actively involved with grade separations in San Mateo County, largely funded through San Mateo County Measure A. With Santa Clara County Measure B now providing funds for Caltrain grade separations in Palo Alto, Mountain View, and Sunnyvale, the need and issues associated with funding and organizational arrangements between Caltrain, VTA, and the cities are now becoming acute.

In addition, the Service Vision analysis indicates that under either Moderate or High Growth Scenarios the existing two-track railway must be expanded to four tracks in northern Santa Clara County. The Moderate Growth Scenario describes the need for a four track station in either Palo Alto or Mountain View, and the High Growth Scenario describes the need for four tracks configured as either a four track station or a longer

passing section in Palo Alto or Mountain View. Very little detail is available on the physical requirements for four-track segments. Impacts in Palo Alto could therefore be significant given the constrained right-of-way at the California Avenue Station and Alma Street, as well as sensitive adjacent residential land uses.

Caltrain staff has indicated that their current position regarding the need to plan for four tracks on ongoing grade separation planning is that grade separations "should not preclude" future expansion to four tracks. The specific effect on grade separation plans in Palo Alto will therefore likely develop over time, as depending on the timing of Palo Alto's grade separation decisions coincide with Caltrain's decisions and next steps on its service vision, funding strategies, and organizational evolution. There is the potential that Caltrain may in the future take the position that its interest in a four-track segment delays, precludes, or increases the cost of grade separations in Palo Alto.

These considerations raise the question of Palo Alto's position regarding the Caltrain Long Range Service Vision. Options for the City Council could range among the following, as examples:

a. that Caltrain's Long Range Service Vision must recognize that it is dependent on grade separations acceptable to the affected communities;

b. that Caltrain must commit to addressing grade separations prior to adopting a Long Range Service Vision; or,

c. that Caltrain must conduct a feasibility study of passing tracks in North Santa Clara County before adopting a Long Range Service Vision.

As currently drafted, the Caltrain staff recommendation addresses grade separations under point 1.E.v.5:

> *E. Delivery of these services will occur through the incremental development of corridor projects and infrastructure to be further defined through individual planning process, feasibility studies and community engagement. At this time, such infrastructure is conceptually understood to include… v. Completion of key regional and state partner projects including… 5. The substantial grade separation of the corridor as well as safety upgrades to any remaining at-grade crossings, undertaken in a coordinated strategic manner driven by the desires of individual local jurisdictions as well as legal requirements associated with any proposed 4-track segments.*

As this language essentially aligns with the second option "a" above, the City Council may direct staff to communicate Palo Alto's support for the Long Range Service Vision as currently drafted. Staff would work with the Mayor and Councilmember Kou, Palo Alto's representative on the Caltrain Local Policy Maker Group (LPMG), to communicate this position.

Alternatively, the City Council may consider advocating that Caltrain make a more direct

commitment to grade separations as a part of the Long Range Service Vision. The Caltrain staff recommendation suggests that next steps will be to consider the organizational changes necessary to advance the Service Vision. In the near term, these issues will likely be intertwined with decisions to seek voter approval for funding of Caltrain operations as well as capital needs.

As a specific example of near-term issues, VTA has indicated it will not bond Measure B funds for grade separations. This leaves cities with the prospect of taking on the responsibility for bonding hundreds of millions of dollars or delaying project implementation until tax proceeds accumulate. Council direction for a greater commitment to grade separations could include Caltrain participation in the financing of grade separation projects.

Based on the current state of grade separation planning in Palo Alto as well as these regional issues, staff recommends that the City Council consider a position of general support for the Caltrain Long Range Service Vision conditional on its commitment to immediately initiate a feasibility study of four-track segments in North Santa Clara County and exploration of participation in financing Measure B grade separation projects.

Timeline, Resource Impact, Policy Implications

Caltrain staff has indicated plans to present the Long Range Service Vision for Caltrain Board adoption in October. City Council direction on comments would enable Palo Alto's interests to be specifically considered during the Board's deliberations.

Environmental Review

The submittal of comments on the Caltrain Business Plan is not a project as defined by the California Environmental Quality Act (CEQA).

Attachments:

- Attachment A: Caltrain BP Service Vision Summary Memo

SUMMARY OF DRAFT RECOMMENDATION FOR CALTRAIN'S LONG RANGE SERVICE VISION

The following memo supplements the PowerPoint presentation provided to the Peninsula Corridor Joint Powers Board at their August meeting. It provides a high level summary of the service planning and business case analysis completed as part of the Caltrain Business Plan to date and explains the importance of choosing a "Long Range Service Vision" at this stage in the planning process.

The memo then describes staff's draft recommendation for the Long Range Service Vision and explains why staff has recommended this specific vision relative to other options considered. Finally, the memo includes a narrative description of the recommended Vision and a draft of the precise language that the Board would be asked to consider for adoption in October, pending revisions or changes based on input received from the Board and through outreach planned in August and September.

A LONG RANGE VISION FOR CALTRAIN SERVICE

The Caltrain Business Plan is an expansive planning process that has been ongoing for more than a year. A major focus of the plan has been to develop analysis of different long range service options for Caltrain and to weigh the costs, revenues, benefits and impacts of these options through a detailed "Business Case" analysis. At this stage of the Business Plan process, Caltrain staff has developed and evaluated three distinct "growth scenarios" that provide illustrative options for how the Caltrain Service could grow by 2040. Based on this analysis, staff has now developed a single, recommended "Long Range Service Vision" for consideration and potential adoption by the Board.

Choosing a "Long Range Service Vision" is an important milestone in the Business Plan process. Having a clearly articulated goal for the quantity and type of service that the railroad aspires to provide in the future will provide staff with the critical guidance needed to complete the Business Plan. Once adopted, the Long Range Service Vision will create a framework that allows staff to "work backwards" from 2040, developing analysis showing how the Vision can be phased, funded and implemented over time. This analysis will be conducted in the fall of 2019 with a goal of completing the Business Plan by early 2020.

A REGIONAL VISION BUILT ON REGIONAL INVESTMENTS

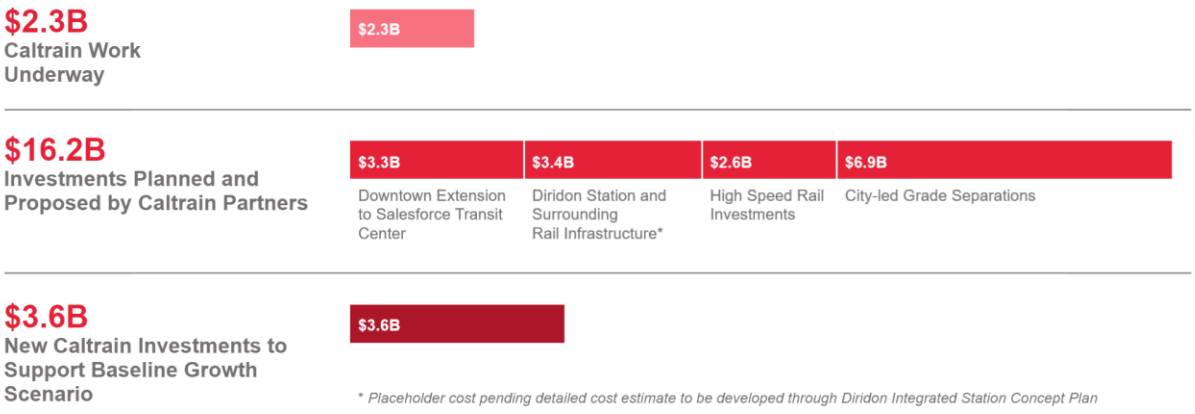
Selection of a Long Range Service Vision will also allow Caltrain staff to engage efficiently and constructively in the development of other long range plans and projects throughout the region. This is particularly important since the Caltrain corridor interfaces with many different local, state and regional transportation systems and investments. While the Long Range Service Vision is fundamentally focused on Caltrain, the Vision must account for and integrate a vast array of transportation projects that have been planned by corridor cities and regional and state partner agencies. Key projects that directly influence Caltrain's corridor and long range service ambitions include;

- California's High Speed Rail System
- The Downtown Extension to the Salesforce Transit Center
- The rebuilding of Diridon Station in San Jose
- Multiple grade separation projects planned and contemplated by corridor cities

The Caltrain Business Plan and Caltrain's Long Range Vision have been deliberately developed to integrate and build on all of these projects. One of the goals of the 2040 Vision is to build a "big tent" that shows how all of the investments currently being planned in the corridor can fit together as part of a cohesive whole, with expanded Caltrain service further enhancing their value and importance.

It is important to note at the outset, that these regional and partner projects also drive a significant portion of the overall investment costs that are considered within the Long Range Service Vision. Figure 1 shows the total set of capital investments that have been included in the "baseline" growth scenario, broken down by major source.

Figure 1- Capital Investments Included in the "Baseline" 2040 Growth Scenario



All costs have been adjusted to 2018 dollars

The costs shown in Figure 1 total to $22.1 billion in 2018 dollars and are divided into three categories;

- **Caltrain Work Underway**: Including electrification and other major capital projects that are already in progress
- **Investments Planned and Proposed by Caltrain Partners:** Including major terminal projects like the Downtown Extension (DTX) and Diridon Project as well as High Speed Rail Investments and those grade separations that are already actively being planned by local jurisdictions. While all of these projects are in active stages of planning, most are substantially unfunded.
- **New Caltrain Investments to Support the Baseline Growth Scenario:** This category includes the essential investments that the Caltrain believes will be needed by 2040 to support the baseline level of blended service. Examples include additional electrified rolling stock (to fully electrify the fleet and expand all consists to 8-car trains), level boarding, expanded storage and maintenance facilities and additional grade crossing improvements. These projects are not funded.

These costs have been used as the basis, or "baseline," for looking at the incremental investment that would then be required to achieve the higher levels of Caltrain service contemplated in the "moderate" and "high" growth scenarios.

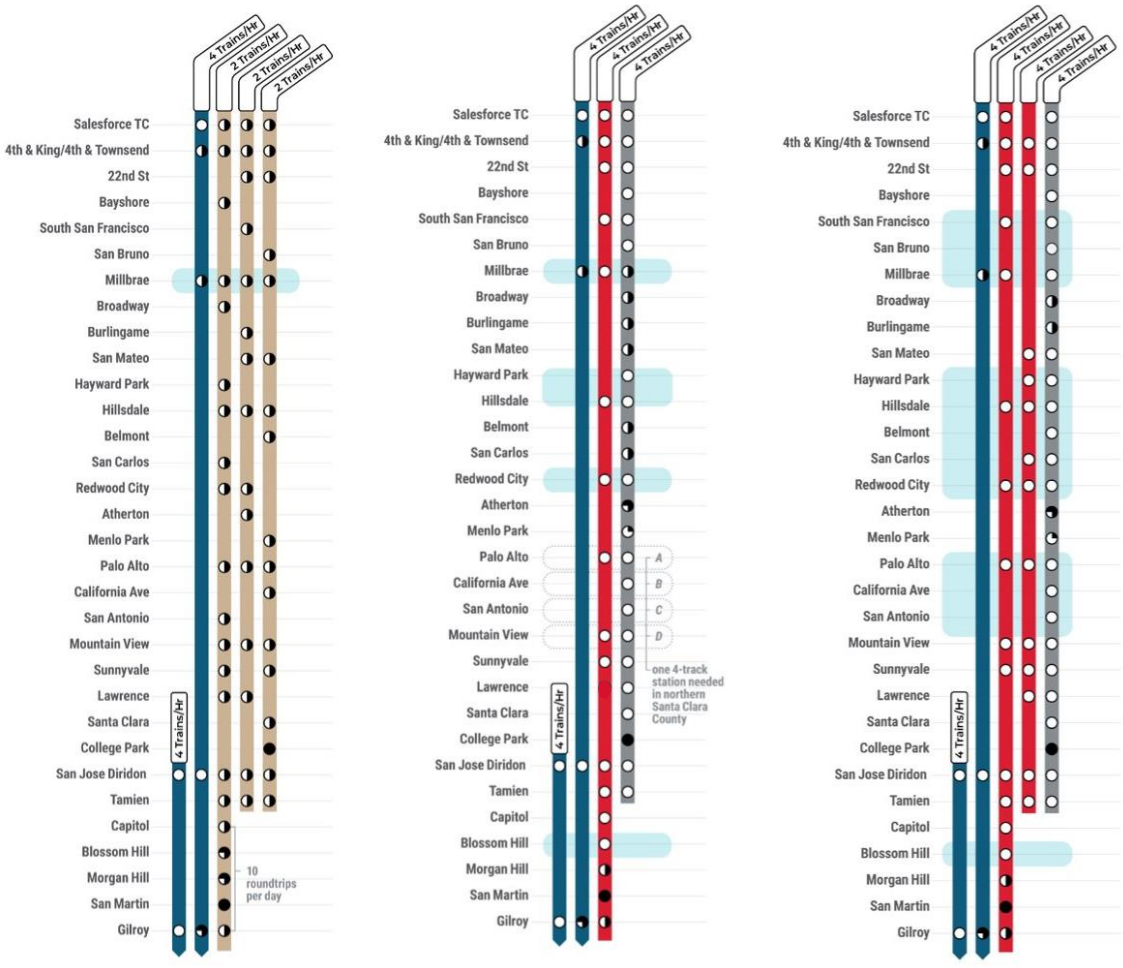
DEVELOPMENT OF "GROWTH SCENARIOS"

Much of the technical work of the Caltrain Business Plan over the past year has been focused on the development and refinement of three illustrative "Growth Scenarios," each representing a different option for the kind of service that Caltrain could provide in 2040 given different levels of supporting investment. The three scenarios include a "baseline" level of service (consistent with Caltrain's prior long range planning and the regional and partner projects discussed above) and two additional scenarios that consider what it might look like if Caltrain were to further expand service (the "moderate" and "high" growth scenarios).

Although illustrative, these growth scenarios where developed at a high level of detail through an extensive service planning process (diagramed in Figure 2). Details of each of these scenarios are shown in Figure 3 and can also been reviewed in the accompanying presentation and on the project website, www.caltrain2040.org.

Figure 2 – Growth Scenario Development Process

Figure 3 – Growth Scenario Detail



The process to develop the different growth scenarios evaluated in the Caltrain Business Plan was conducted in a highly transparent and collaborative manner. Throughout the development of the Growth Scenarios, Caltrain staff have met on a monthly basis to share information and discuss findings with a technical team of partner agency staff (the Project Partner Committee) as well as with corridor local jurisdiction staff (the City and County Staff Group) and corridor elected officials (the Local Policy Maker Group). Additionally, the project team has held quarterly stakeholder meetings with a Stakeholder Advisory Group representing over 90 different organizations and has held multiple rounds of one on one meetings with every city in the corridor. The team also developed customized "booklets" for each city, showing the impacts and benefits of different growth scenarios on their jurisdiction. All told, Caltrain staff have presented Business Plan materials at over 150 stakeholder meetings during the course of the last year.

WEIGHING CALTRAIN'S CHOICES

The detailed illustrative growth scenarios developed through the service planning process were used to model ridership, specify and estimate the costs of required capital investments, and to model detailed operating costs. These outputs were then used as the basis for developing a "Business Case" analysis of each scenario. The Business Case analysis is a structured framework that helps analyze and weigh the costs and benefits of the different options. The analysis examines five areas, each of which is presented in detail in the accompanying presentation and is discussed briefly in this memo.

Figure 4 – Areas of the Business Case Analysis

SERVICE COMPARISION

The service comparison section of the business case looks at the key service, and service-related qualities of the different scenarios and compares them on a head to head basis. The accompanying presentation provides a detailed analysis. In general, the quality of service across the options as measured by various metrics improves as the level of train service and investment increase. Conversely, however, the increased service included in the "high growth" scenario requires the construction of extensive 4-track segments in the corridor – complex infrastructure that has the potential to drive significant community impacts. A detailed service comparison is provided in the accompanying presentation and a summary table of key metrics is shown in Figure 5.

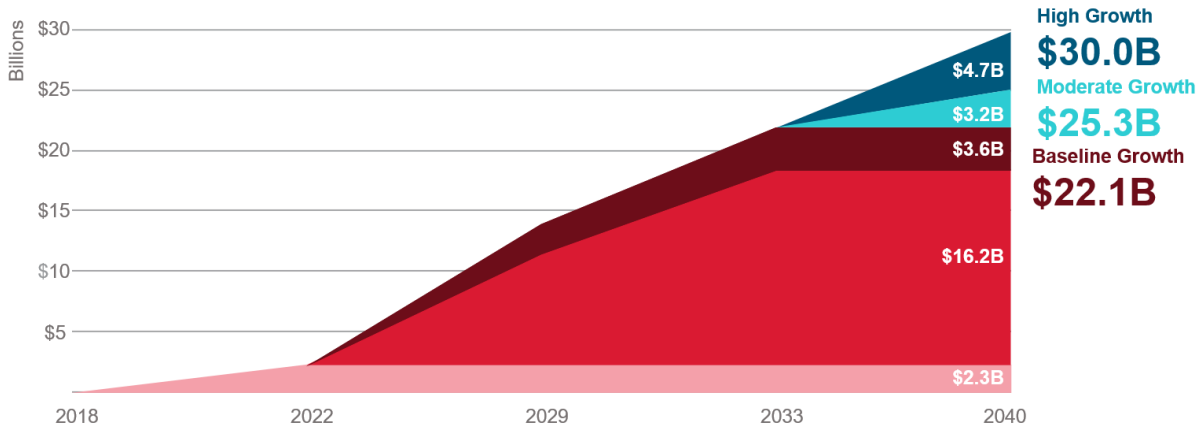
Figure 5 – Summary of Key Comparative Service Metrics

	Metric	Baseline Growth	Moderate Growth	High Growth
Frequency	Number of Stations Served by Frequent Service (>4 TPHPD)	13 Stations	21 Stations	24 Stations
	Longest Wait Times At Major Stations Served by All Trains	22 minutes	12 minutes	8 minutes
Connectivity	Percentage of Station Pairs Connected Without/(With) a Transfer	84% (91%)	96% (98%)	99% (99%)
	Number of Station Pairs Not Connected at All*	95	17	2
Network Integration	Timed Connections at Regular Intervals	No	Yes	Yes
Ridership	Daily Ridership (capacity constrained)	151,700 Riders	177,200 Riders	207,300 Riders
	Comfortable Peak Hour Train Loads?	No	Some Crowding	Yes
Travel Time	Travel Time, San Francisco (STC) to San Jose (Diridon)	69-73 Minutes	61 Minutes	60 Minutes
	Average Travel Time per Rider, All Origin-Destination Pairs	33 Minutes	32 Minutes	31 Minutes
Infrastructure	Passing Tracks Needed	<1 Mile	<5 Miles	15-20 Miles

FINANCIAL ANALYSIS

Detailed capital cost estimates for each scenario, building incrementally off of the "baseline" investments described previously were developed for the moderate and high growth scenarios. Figure 6 shows the baseline investment described previously, profiled over time, with the incremental additional investment required to achieve the "moderate" or "high" growth scenarios shown as an additional increment.

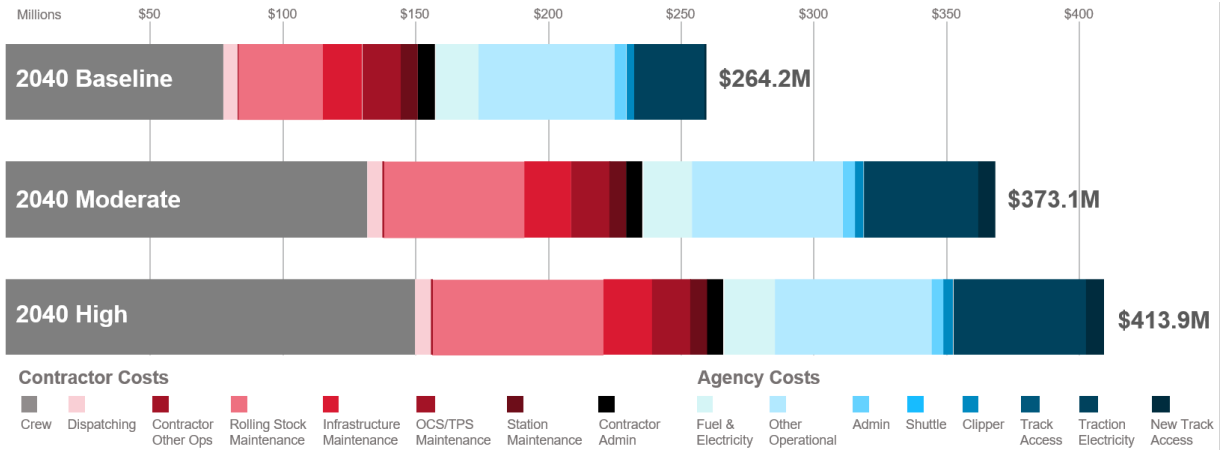
Figure 6 – Total Capital Investment by Scenario



All costs have been adjusted to 2018 dollars

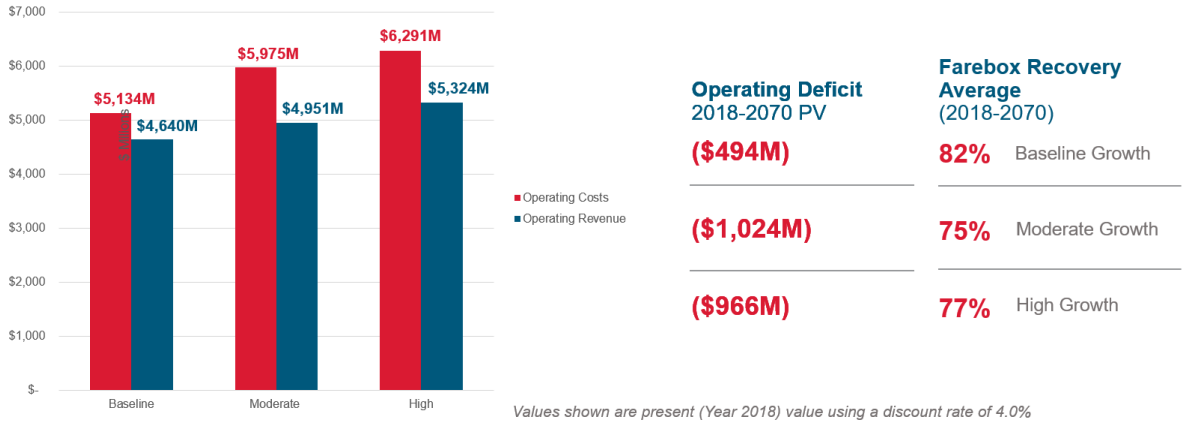
Figure 7 shows the projected 2040 annual operating and maintenance costs for each of the scenarios (in 2018 dollars).

Figure 7 – Total Operating Costs by Scenario



Finally, Figure 8 shows the net present value of total operating costs and projected revenues projected over the 2018-2070 period (the lifecycle timeframe of key investments included in each of the scenarios) along with the average fare box recovery rate across that same period. Additional financial analysis and metrics are reported in the accompanying presentation.

Figure 8 – Net Present Value of Total Operating Costs and Revenues by Scenario, 2018-2070



Values shown are present (Year 2018) value using a discount rate of 4.0%

CALTRAIN ECONOMIC ANALYSIS

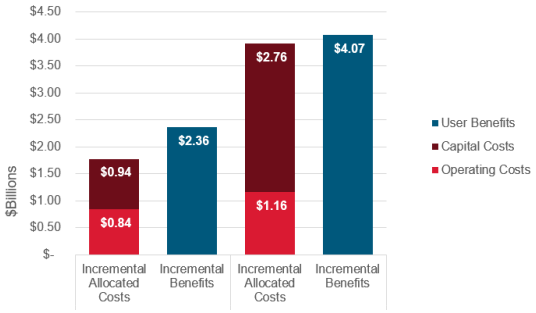
The Business Plan team also developed a series of analyses examining the economic impact of the different growth scenarios on Caltrain riders. This analysis considers the various ways that improved Caltrain service could directly benefit riders, monetizes these benefits and compares them to costs. This analysis is done on a marginal basis against the baseline scenario meaning that calculations are based on the incremental costs and benefits of the "moderate" or "high" growth scenarios relative to the baseline. Costs included in the analysis have also been "allocated" meaning that the overall costs of shared investments (eg projects that serve multiple purposes or benefit multiple users beyond just Caltrain) have been proportioned so as to fairly weigh Caltrain "costs" against Caltrain "benefits." Calculations are performed for the period between 2040 and 2070, when each growth scenario is assumed to be fully operational. Figure 9 shows directly calculated benefits while Figure 10 shows the net present value of monetized benefits weighed against the value of incremental, allocated costs.

Figure 9 –Estimated Incremental Economic Benefits to Caltrain Users Relative to Baseline, 2040-2070

		Moderate Growth		High Growth	
Benefit	**Unit**	**Total***	**Per Year Average**	**Total***	**Per Year Average**
Existing Transit User Travel Time Savings	*hours*	12.9M	0.43M	20.9M	0.70M
New Transit User Travel Time Savings	*hours*	27.7M	0.92M	40.4M	1.35M
VMT Savings from New Transit Users (Avoided Auto Trips)	*vehicle miles*	9,000M	300M	16,100M	540M
Roadway Network Safety Improvements	*reduced fatal/injury accidents*	7,300	240	13,000	430
Public Health Benefits (from Active Transportation Mode Access)	*lives saved*	70	2	150	5
	reduced absent days at work	30,000	1,000	67,000	2,200

**Values rounded for presentation purposes*

Figure 10 – Net Present Value and Benefit / Cost Ratio of Caltrain User Benefits Weighed Against Allocated Costs, 2040-2070



Net Present Value 2018-2070 PV	Benefit Cost Ratio 2018-2070	
$0.58B	1.33	Moderate Growth
$0.15B	1.04	High Growth

REGIONAL ANALYSIS

The Business Plan team also developed analysis and qualitative discussion of a number of "regional" benefits that would result based on different levels of investment in the Caltrain system. These benefits accrue to a general population and not just users of the system. These regional benefits are described in detail in the accompanying presentation and are summarized in Figure 11 below

Figure 11 – Summary of Regional Benefits

	Metric	Baseline Growth	Moderate Growth	High Growth
Freeway Throughput	Additional Freeway Lanes	+4 lanes	+5.5 lanes	+8.5 lanes
Regional Rail Integration	Accommodation of Large-Scale Corridor-Sharing Beyond HSR	could be scaled to accommodate	could be scaled to accommodate	can accommodate
Environmental Benefits	GHG (MTCO2e)	1,108,045	1,898,330	3,006,028
Land Value Benefits	Property Value Premiums Generated by 2040 Service Growth within 1 Mile of a Station	$10B	$10 - $22B	$22B
Economic Productivity	Economic Output	$32.8B	$40.8B	$47.7B
	Full and Part-time Jobs	44K job-years	51K job-years	69K job-years

FLEXIBILITY AND UNCERTAINTY

Finally, the Business Plan team considered the degree of flexibility and uncertainty inherent in the growth scenarios examined. The detailed service plans developed in each scenario are "illustrative," not definitive and much work remains both within and beyond the Business Plan process to examine specific service patterns and service levels at individual stations.

Additionally, all of the 2040 growth scenarios have been developed in a way that includes and integrates regional projects like High Speed Rail, the Downtown Extension and the rebuilding of Diridon Station. These projects are in various stages of planning and design but all currently lack the funding. There is a great deal of potential uncertainty regarding the timeframe in which they will be delivered and the final form they may ultimately take. Similarly, while larger regional visions for a greatly expanded, integrated rail network are ongoing there is a tremendous amount of uncertainty around how and when these concepts may ultimately manifest.

The issues of service flexibility and uncertainty around regional projects are particularly relevant in the context of understanding where overtake infrastructure may be required. The location and extent of required overtake infrastructure is highly sensitive to what service is being accommodated. This especially true in the "High growth" scenario where the large volume of blended train traffic creates a need for long overtakes used by multiple different operators. The "moderate" growth scenario has over take infrastructure needs that are more modest and can be planned for more discretely.

Finally, this section of the presentation also discusses a number a series of initial financial sensitivity tests to understand how key business metrics associated with the different growth scenarios may vary in response to changing conditions.

RECCOMENDED LONG RANGE SERVICE VISION

SUMMARY AND BASIS FOR RECCOMENDATION

Caltrain staff has developed a draft recommendation for the Long Range Service Vision. This recommended Vision is described in detail below, but, as it relates to the options studied, the recommendation is that Caltrain adopt and pursue a Vision compatible with the "moderate" growth scenario while also taking a series of steps to plan for and not preclude the potential realization of the "high growth" scenario.

The extensive analysis conducted during the Business Plan process has shown that there a strong demand for expanded Caltrain service and the business case analysis conducted as part of the plan has shown that there is a clear case, based in economic and regional benefits, for pursuing a Vision that goes beyond the baseline levels of service previously contemplated. While the high growth option generates the greatest ridership and expanded regional benefits, it also comes at a higher cost and carries significantly higher levels of uncertainty and potential for community impacts. Therefore, based on the assembled evidence, staff has developed a recommendation that would direct Caltrain to pursue a service vision consistent with the "moderate" scenario while retaining the ability to expand to a level consistent with the "high growth" scenario at such time as demand warrants or the region has made the policy and funding commitments to pursue a larger, integrated rail system.

DESCRIBING THE VISION

The Long-Range Service Vision for Caltrain provides a world class service that is tailored to the future needs of our local communities, the region and the state. It responds to and integrates the committed and planned investments in the Caltrain corridor to deliver the greatest value to the public and region, while maintaining the flexibility to respond as local and regional needs develop.

The Key Features of the Service Vision Include:

- Fast and frequent all day (every day) service
    - Total peak hour frequencies of 8 Caltrain trains per direction
    - Faster, all day baby bullet service with express service every 15 minutes
    - Significantly increased off-peak and weekend service levels
    - User friendly, show up and go service with easy to understand schedules
- Increased Capacity
    - Provides the capacity to triple today's ridership, serving nearly 180,000 people a day
    - Adding more than 5 freeway lanes worth of regional capacity
- Regional Connectivity

- End to end service- connecting Gilroy to downtown San Francisco (all day, both ways)
- Comprehensive local service providing coverage to every community
- Regular service making transfers and connections easier and more predictable

Major Additional Benefits

The Vision will bring huge benefits beyond direct improvements to service. Once complete, the Vision will deliver;

- 1.3 million hours of travel time savings for existing and new Caltrain riders every year as compared to the baseline scenario
- 300 million vehicle miles not traveled every year as compared to the baseline scenario
- $40.8 billion in regional economic output created by ongoing capital and operating investments
- By 2040 Caltrain service will add between $25 and $37 billion in property value premiums to residential and office properties within 1 mile of stations. (This analysis is conservative and excludes San Francisco as well as commercial, non-office properties for which estimates could not be reliably developed)
- The Vision will result in a reduction of nearly 2 million metric tons of CO2 as well as other air quality improvements

Ready to Grow with the Region

- The Vision has been designed to integrate and add value to the many local, regional and state investments that are being planning in the Caltrain corridor. These include projects like grade separations, major improvements to terminal infrastructure and stations in San Francisco and San Jose, and the integration of the state's high speed rail system.
- The vision also anticipates the ongoing role of Caltrain in a regional rail network that in addition to high speed rail could include a new rail service in the Dumbarton corridor, a second transbay crossing, service to the Monterey peninsula and ongoing improvements to service on Capital Corridor and ACE.
- As part of the Business Plan process, staff evaluated how the service and infrastructure contemplated in the recommended Vision could scale up to an even "higher" level of growth that would allow for up to 16 trains per hour per direction and even greater regional integration and further expansion of rail. At this time, there is still a great deal of uncertainty around the future of regional rail and Caltrain does not feel that we can independently recommend moving forward with a maximum growth approach given the high costs and potential for extensive community impacts.

- Instead, we are recommending a "do not preclude" approach that would allow for this future growth to proceed once key regional decisions and funding commitments are in place. In practice, this would mean limiting the sale or encumbrance of certain JPB land, accounting for the possibility of more trains when we do terminal and facility planning, and considering the potential need for 4 tracks as certain grade separations are designed. At the same time, Caltrain will actively participate in evolving regional conversations and will help the region and the state evaluate the feasibility and benefits of an expanded and integrated rail network. If the region is truly prepared to move forward with a full regional rail expansion Caltrain will be ready.

Capital Costs

- Achieving the Vision will also be costly- the total range of all projects contemplated to achieve the Vision from Gilroy to San Jose include up to $25 billion (this includes roughly $2.5 billion of Caltrain investments already paid for and underway).
    - The significant majority of this cost is driven by projects that are being planned by corridor partners (DTX in San Francisco, grade separations all along the corridor, the potential cost of the Diridon Station project, and HSR improvements- collectively account for more than $16 billion of the total).
    - The goal of the Vision is to help knit these projects together and to add value to all of them by providing greatly improved Caltrain service. Direct Caltrain investments contemplated (beyond the existing projects already underway) total to roughly $6.5 billion)
- New sources of funding will clearly be required to address this level of need- including to even come close to achieving the baseline. The $22 million a year contributed by member agencies to the capital budget is not going to be sufficient to do any of this.

Operating Costs

- Projected 2040 operating annual costs for the Vision are $373.1 million a year in current dollars (compared to about $135 million in 2018). By way of comparison, achieving a "baseline" level of growth would cost about $265 million a year in 2040
- Financial projections show that the efficiency of the system will remain high- we are projecting an average farebox recovery ratio of 75% (holding today's fare levels constant with inflation). Nonetheless, the need for subsidy will grow as the size of the system increases. Caltrain may need as much as $90 million a year in operating subsidy (compared to the roughly $36 million in subsidy it receives today- $30 million of which come from local member agencies). As the business plan continues we will be exploring ways to further

increase system efficiency and generate additional revenues that would offset the need for direct subsidy. Nonetheless, new funding is clearly needed.

Incremental Improvements

- The Vision is not one project- it can be implemented incrementally over time with improvements to service and capacity delivered along the way. During the remainder of the Business Plan Caltrain will work to identify key incremental steps that can be delivered in the near- and medium term timeframes.
- We don't need to wait until 2040- the first major improvement in service is coming soon. Electrification, in 2022 is the first step and will mark a substantial step forward towards the realization of this vision with significant service improvements throughout the corridor.

CALTRAIN'S LONG RANGE SERVICE VISION – DRAFT LANGUAGE

The following is the specific, draft "Service Vision" language that the JPB would be asked to consider for adoption in October. This language will be reviewed and revised based on input from the Board and comments received through stakeholder and public outreach.

1) Caltrain's Long Range Service Vision directs the railroad to plan for a substantially expanded rail service that will address the local and regional mobility needs of the corridor while supporting local economic development activities. When fully realized, this service will provide;

A. A mixture of express and local Caltrain services operated in an evenly spaced, bi-directional pattern

B. Minimum peak hour frequencies of;
- 8 trains per hour per direction on the JPB-owned corridor between Tamien Station in San Jose and San Francisco, extended to Salesforce Transit Center at such time as the Downtown Extension is completed
- 4 trains per hour per direction between Blossom Hill and Tamien Stations, subject to the securing of necessary operating rights
- 2 trains per hour per direction between and Gilroy and Blossom Hill Stations, subject to the securing of necessary operating rights

C. Off-peak and weekend frequencies of between 2 and 6 trains per hour per direction north of Blossom Hill and hourly between Gilroy and Blossom Hill, with future refinements to be based on realized demand

D. Accommodation of California High Speed Rail trains, in accordance with the terms of existing and future blended system agreements between the JPB and the California High Speed Rail Authority

E. Delivery of these services will occur through the incremental development of corridor projects and infrastructure to be further defined through individual planning process, feasibility studies and community engagement. At this time, such infrastructure is conceptually understood to include;

i. Investments in rail systems including a new, high performance signal system
ii. Station modifications including platform lengthening, level boarding, and investments in station access facilities and amenities to support growing ridership and improve customer experience
iii. New and modified maintenance and storage facilities in the vicinity of both terminals as well as the expansion of the electrified Caltrain fleet
iv. A series of short, 4-track stations and overtakes at various points throughout the corridor
v. Completion of key regional and state partner projects including
    1. The Downtown Extension to the Salesforce Transit Center
    2. The reconstruction of Diridon Station and surrounding rail infrastructure
    3. The reconstruction and electrification of the rail corridor south of Control Point Lick to the Gilroy Station
    4. Additional improvements to allow for the operation of High Speed Rail service between Gilroy and San Francisco
    5. The substantial grade separation of the corridor as well as safety upgrades to any remaining at-grade crossings, undertaken in a coordinated strategic manner driven by the desires of individual local jurisdictions as well as legal requirements associated with any proposed 4-track segments.

2) Caltrain's Long Range Service Vision further directs the railroad to continue its consideration of a potential "higher" growth level of service in the context of major regional and state rail planning. Specifically, the Long Range Service Vision directs the railroad to;

A. Work with regional and state partners to study and evaluate both the feasibility and desirability of higher levels of service in the context of major regional and state rail

initiatives including planning related to the Dumbarton Rail Corridor, the 2nd Transbay Crossing, the potential for expanded ACE and Capitol Corridor services, and ongoing planning for the California High Speed Rail system.

B. To take certain actions to consider and, where feasible, not preclude such higher levels of service as they specifically relate to;
   i. The planning of rail terminals and related facilities
   ii. The sale or permanent encumbrance of JPB land
   iii. The design of grade separations in areas where 4-track segments may be required
   iv. The sizing of future maintenance facilities and storage yards

C. To return to the board with a recommendation regarding any formal expansion of the Long Range Service Vision at such a time as clear regional and state policy and funding commitments are in place and the feasibility of such an option on the corridor has been confirmed

3) Finally, Caltrain's Long Range Service Vision directs the railroad to periodically reaffirm the Vision to ensure that it continues to provide relevant and useful guidance to the railroad. Such reaffirmations should occur;

A. At a regular intervals of no less than 5 years

B. In response to significant changes to JPB or partner projects that materially influence the substance of the Long Range Service Vision