BUILDING A BETTER BART

Investing in the Future of the Bay Area's Rapid Transit System

July 2014 DRAFT

BART

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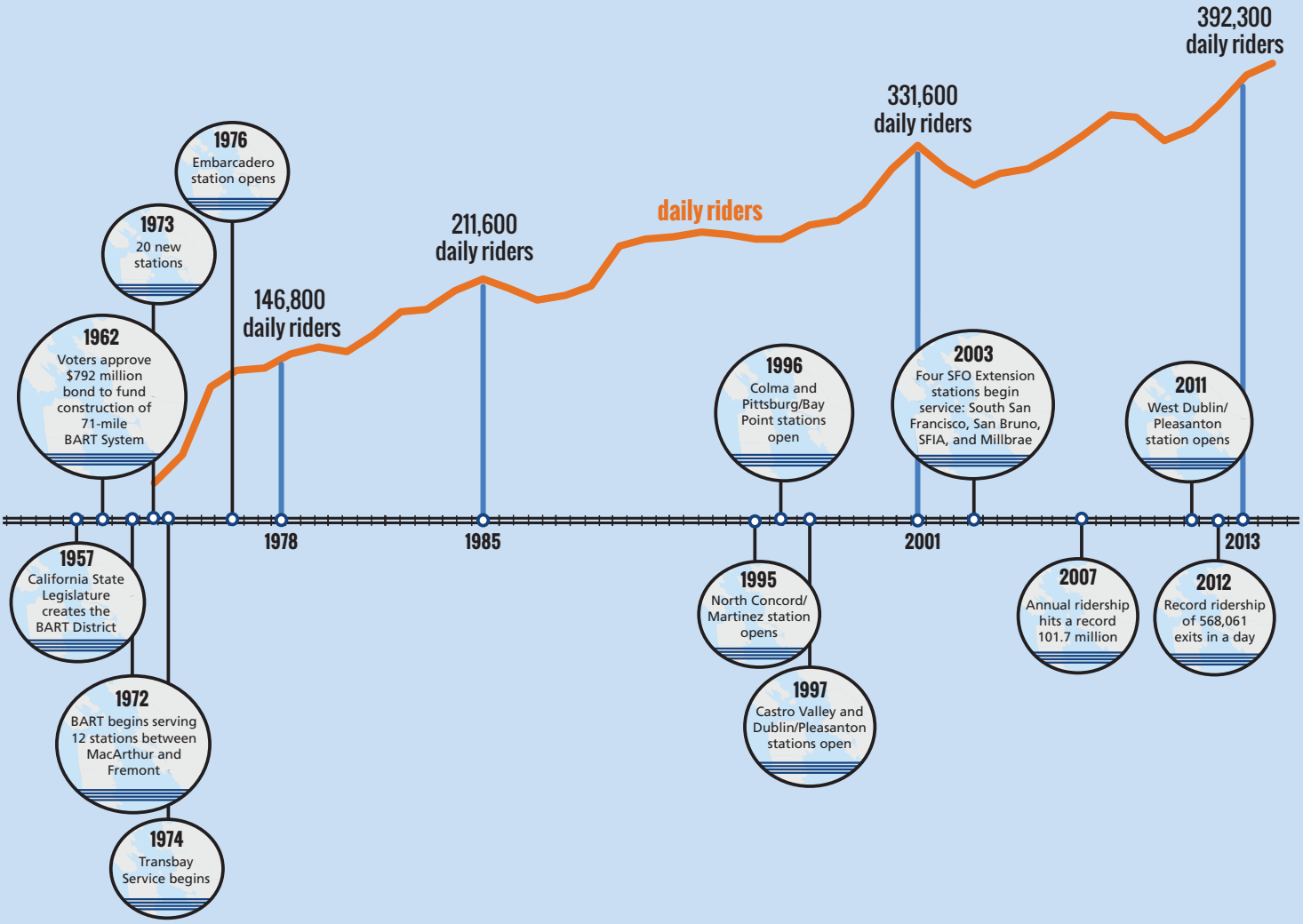


The Story of BART

INTRODUCTION

In 1962, the residents of the Bay Area made a visionary investment in the region's future by voting to fund the initial construction of the Bay Area Rapid Transit system (BART). Thanks to their foresight, today's Bay Area residents enjoy one of the strongest economies and highest qualities of life in the world, supported by the efficient mobility provided by BART.

After decades of service to the region, the BART system now finds itself facing two critical challenges. First, hundreds of millions of dollars in reinvestment are needed to maintain and upgrade 40-year old systems and infrastructure. While BART has always been an exceptional steward of public resources, much of its core infrastructure is now approaching the end of its useful life and major capital investment is required for the system is to continue its record of safe, high-quality, and reliable service.

Secondly, new system capacity is needed to support a growing region. Ridership is already outgrowing BART's capacity as demographic changes have made transit increasingly popular. The region is planning for much of its future growth to be located around BART stations, which will add even more passengers. Finally, system extensions are under construction to southern Fremont, Silicon Valley/San Jose, Oakland International Airport, and eastern Contra Costa County that may add still more riders to BART's already heavily-used core system. Ironically, BART's extraordinary success is driving some of its most urgent challenges.

This document provides information to help riders and the public better understand the BART system, its history, its current challenges, and what the future holds. It includes an overview of BART's role in the region; BART's financial outlook, capital assets, and recent accomplishments; and the system's major needs for reinvestment, modernization, and expansion to meet growing ridership demands. The document aims to begin a conversation on a question that is central to the region's future: *How can we meet today's challenges in a way that helps to Build a Better BART for the future?*

BART'S ROLE IN THE REGION

The Birth of BART: A Defining Moment in Bay Area History

The idea of a Bay Area rapid transit system surfaced at a turning point in the Bay Area's history. In the late 1940s, the region was experiencing unprecedented growth and increasing congestion on the region's highways threatened to undermine the Bay Area's economic vitality.[1] Just a decade after opening in 1936, the Bay Bridge was already reaching its capacity and the need for another transbay link was becoming apparent.

Policymakers realized that to manage this dramatic growth and allow Bay Area cities to thrive, they needed a strong and coherent vision for the region. The early planners, saw the creation of BART as a mechanism that could lend structure to the region's growth. BART would encourage cohesive development by linking the major commercial centers throughout the nine counties that touch the San Francisco Bay.

1 Bay Area Rapid Transit. *History of BART: The Concept is Born.* Web. http://www.bart.gov/about/history.

BART began operating in 1972 with 28 route miles of track serving 12 stations. It carried 100,000 people during its first week of revenue service. Today, BART comprises 104 route miles of track serving 44 stations in 21 cities and 4 counties. A full overview of the system is provided on pages 8-9.

As the fifth-busiest heavy rail rapid transit system in the United States, BART enables over 400,000 daily riders to access many of the region's prime destinations for work, school and recreation. BART meets the diverse needs of people from different parts of the region, enabling them to interact and share space. In so doing, BART plays a critical role in reinforcing the Bay Area's identity as one region. From the opening of service to the present day, BART has enhanced quality of life in the Bay Area by providing a rapid and reliable alternative to the car and fostering a lifestyle that enables all people to conveniently live, work, and play in different cities.

Supporting the Region's Economic Vitality

Since its creation in the 1970s, BART has served as a guiding force in the Bay Area's growth and development. Research indicates that BART helped preserve the preeminence of downtown San Francisco as a regional economic center during the 1980s when downtowns of major cities in similar metropolises experienced significant losses in employment.[2]

Beyond San Francisco, the BART system has supported the rise of major employment centers in cities throughout the region—including Oakland, Berkeley,

Events Dramatically Illustrate BART's Role

Recent events have demonstrated the magnitude of BART's impact on the Bay Area. BART provided critical support during the Bay Bridge closures over Labor Day weekend in 2013. During Thursday and Friday of that weekend, BART experienced its third- and fourth-highest ridership days ever, at 475,000 and 457,000 riders respectively.

But, BART is a critical back-up when the bridge is not an option; it supports hundreds of thousands of commuters daily. The 2012 fire near the West Oakland station, which resulted in a shut-down of BART's transbay service for morning commuters, dramatically illustrated the challenges of a Bay Area without BART. The emergency shutdown resulted in hours of delay across the Bay Bridge. Despite the deployment of alternatives such as telecommuting, carpooling, and increased ferry and bus service, it was readily apparent that BART is a foundation of the Bay Area's transportation system and plays an essential role in supporting the region's economy.

Both these incidents underscore the fact that the Bay Area's quality of life and economic strength has come to be inextricably linked to the fast, reliable, and resilient regional rail service provided by BART.

2 Cervero, Robert, and John Landis. "Twenty Years of the Bay Area Rapid Transit System: Land Use and Development Impacts." *Transportation Research Part A: Policy and Practice.* 31.4 (1997): 309-333. Web. 6 Mar. 2014. <http://www.sciencedirect.com/science/article/pii/S0965856496000274>.

Walnut Creek, Fremont, Dublin, Pleasanton, and Pleasant Hill—by providing a reliable connection to thousands of commuters who work in these cities each day. The system has also encouraged mixed-use developments and multi-family housing around its stations, allowing more Bay Area families access to jobs and schools without the expense of a car.

In 2012, UC Berkeley and the Bay Area Council conducted a "BART State of Good Repair Study," which provides insight into how BART service impacts the Bay Area's economy. The study estimated a net loss in value for the region if BART is unable to maintain its reliable service between $22 and $33 billion dollars over the next 30 years.[3] The study found the following benefits of BART: travel and vehicle ownership cost savings for riders; reduced traffic congestion; business operating cost savings corresponding with reduced costs for workers and increased reliability stemming from reduced congestion; and increased business productivity due to expansion in access to labor markets.

Sustainability

BART plays a central role in meeting the region's sustainability goals. In California, about 40% of greenhouse gas emissions come from transportation, and of those, about 70% are from personal driving.[4] A 2010 study seeking to quantify the greenhouse gas emissions related to the BART system found that BART reduced over 1 million metric tons of carbon dioxide per year, and the system eliminated 12.7 times the emissions it produced through its own service.[5] These emissions reduction benefits result from a mode shift from personal vehicles; a reduction in roadway congestion; and transit's ability to promote dense, mixed land-use patterns that reduce vehicle trips and trip distances. Data gathered by the Bay Area Council in 2013 indicated that when BART is not running, congestion produces 16 million pounds of additional carbon each day.[6] These contributions make BART indispensable to the important task of creating a more sustainable Bay Area.

Moving People Across the Bay

21,000 PEOPLE/HOUR

Moved under the Bay by BART at rush hour

9,000 VEHICLES/HOUR

Moved across Bay Bridge at rush hour

Highway vs. BART

25,000 PEOPLE/HOUR

BART capacity compared to one highway lane

2,400 VEHICLES/HOUR

Highway capacity per lane

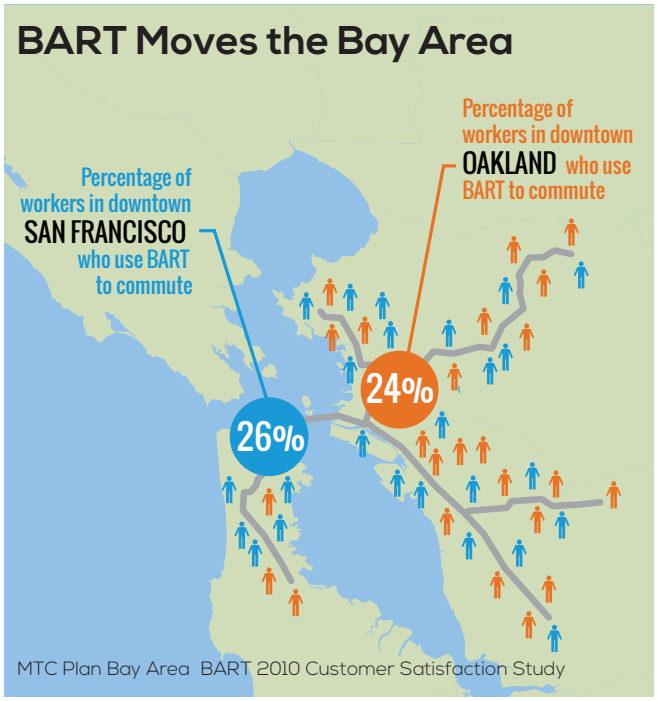
2011 Bay Bridge Toll Evaluation Final Report
Sustainable Communities Operations Analysis Study + Highway Capacity Manual 2010

3 *"A State of Good Repair for BART: Regional Impacts Study What Could Happen if BART Fails To Maintain A State of Good Repair"* Elizabeth Deakin, University of California, Berkeley, Arlee Reno, Cambridge Systematics, Inc., James Rubin, University of California, Berkeley, Sean Randolph, Bay Area Council Economic Institute, Michael Cunningham, Bay Area Council, May 2012.

4 "California Greenhouse Gas Inventory for 2000-2012." California Air Resources Board, http://www.arb.ca.gov/cc/inventory/data/data.htm.

5. Bay Area Rapid Transit. *Quantifying BART's Greenhouse Gas Emissions with the American Public Transportation Association's Recommended Practice.* 2010.

6. Bay Area Council. *BART Strike Having Costly Environmental Impact on Bay Area.* 2013.



Accommodating Growth

Similar to the era of BART's founding, the Bay Area is once again at a turning point. The State of California has acknowledged climate change as a major public policy issue, and has mandated that regions develop sustainable visions for future growth that reduce the 40% of the state's greenhouse gas emissions that are associated with transportation.[7] In response, the region has developed its first integrated transportation and land use plan, Plan Bay Area.

Plan Bay Area combines the Metropolitan Transportation Commission's (MTC) 2040 Regional Transportation Plan with the Association of Bay Area Governments' (ABAG) Sustainable Communities Strategy. This plan sets a vision for regional growth in which public transportation forms the backbone of the next chapter in the Bay Area's development.[8] By 2040, Plan Bay Area anticipates 2 million additional Bay Area residents. It seeks to accommodate this growth by concentrating future population and employment within priority development areas around major transit hubs – many of which are centered on BART stations. Plan Bay Area also projects 250,000 new jobs (a 40% increase) located in areas adjacent to BART stations. With the system already supporting nearly half of the Bay Area's transit passenger miles, BART's role to the region is projected to become more important than ever before.

7. California Assembly Bill 32 (AB 32) passed in 2006 required the California Air Resources Board to devise a plan that would reduce California's greenhouse gas emissions to a certain level by 2020. Senate Bill 375 (SB 375) passed in 2008 mandated reductions in greenhouse gas emissions and vehicle miles traveled through strengthening linkages between transportation investment decisions and land use patterns.

8 BART Transit-Oriented Development Policy, http://www.bart.gov/sites/default/files/docs/BART_TOD_Policy.pdf.

BART's Transit-Oriented Development Program

Transit-Oriented Development (TOD) is higher-density, walkable, mixed-use development located at a transit stop or station. It is designed to allow people to drive less and walk, bike, and take transit more by providing well-connected and human-scale street networks focused around frequent transit service. Successful TOD also improves the efficiency and cost-effectiveness of transit service.

BART's adopted TOD Policy (2005) acknowledges that

> *"by promoting high quality, more intensive development on and near BART-owned properties, the District can increase ridership, support long-term system capacity and generate new revenues for transit… [create] attractive investment opportunities for the private sector and [facilitate] local economic development goals."*

BART's TOD program supports the growth projected in Plan Bay Area by promoting mixed use development at BART stations. BART staff works actively in partnership with cities, community stakeholders, and the private sector to advance and facilitate projects. Completed TOD projects include Castro Valley, Richmond, Fruitvale, Powell Street, Pleasant Hill/Contra Costa Centre, Ashby, and Hercules. New projects are being considered or developed at Pleasant Hill/Contra Costa Center, Richmond, Walnut Creek, West Dublin/Pleasanton, MacArthur, San Leandro, South Hayward, Glen Park, Coliseum, and Millbrae.

Source: BART Transit-Oriented Development Policy, http://www.bart.gov/sites/default/files/docs/BART_TOD_Policy.pdf.

The Challenge of Supporting the Bay Area's Future

Based upon Plan Bay Area growth projections, BART estimates daily ridership of nearly 500,000 by 2025 and 600,000 daily riders by 2040.[9] These forecasts assume the BART system continues to operate reliably day-to-day and is able to expand its capacity to serve this increase in ridership.[10] However, to accommodate this growth and guarantee the system's ongoing reliability will require significant reinvestment in aging infrastructure and expansion of the system.

BART faces nearly $20 billion in operating and capital needs over the next 10 years. Although staff has identified substantial funding to meet this need, both the operating and capital programs face significant funding challenges in coming years. If BART is unable to reinvest sufficiently to keep its infrastructure in good working order, system failures will become more frequent, reliability and service quality for current passengers will decrease, and the system will be unable to serve additional riders; as well as become a less appealing alternative for potential new passengers.

Diminished levels of BART service would have severe implications for the Bay Area's transportation network. Passengers who shift from BART to private automobiles due to poor service would exacerbate congestion on highways that are already at capacity, thus degrading service for existing highway users. A reduction in BART riders and increase in automobile users would further increase vehicle miles traveled, leading to greater greenhouse gas emissions, air pollution, and respective losses in the Bay Area's economic and environmental health. Diminished levels of BART service would also result in a decrease in the number of people the transportation system can move during peak periods at a time when travel demand in the region is growing.

The commitment of funding agencies and public and private partners will be critical to BART's next 10 years and beyond.

9. Bay Area Rapid Transit. SRTP ridership forecasts: does not include the two station SVBX project, State-of-Good-Repair

10. Deakin, Elizabeth, et al. "A State-of-good-repair for BART: Regional Impacts Study." (2012)

INVESTING IN BART'S FUTURE

This section provides a snapshot of BART's 10-year financial outlook, including both capital and operating needs and identified funding sources.

BART's operating financial outlook shows a shortfall of $6 million in FY16 increasing up to $80 million in FY24. However, because BART's future operating projection takes funding availability into consideration in the design of the service plan, the cumulative $500 million operating shortfall represents only 5% of the total projected operating needs forecast over the 10-year timeframe of this plan (and no more than a 7% shortfall in any given year).

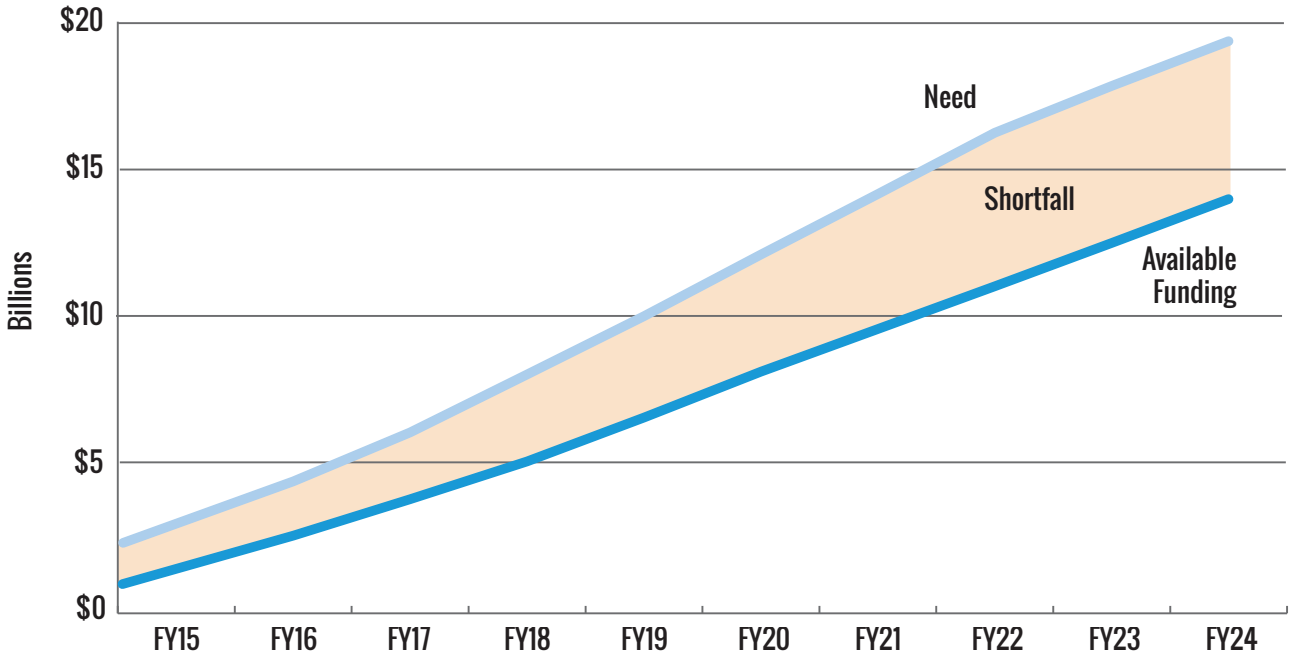
The main drivers of operating cost are the salary and benefit expenses of BART's employees. Current increases in the cost of the medical coverage and pension benefits are having a big impact on BART's future financial plan. BART's capital needs also impact how much funding is available for operations. BART has traditionally allocated operating funds to capital in order to support investment in critical system infrastructure, which is necessary to sustain the reliability and safety of the system.

BART's Capital Improvement Program (CIP), unlike the operating projection, is not financially constrained. The CIP is a projection of all the capital needs that BART faces, regardless of funding availability, and it shows a much more significant shortfall. Capital expenses include projects such as a new fleet of rail cars, upgraded maintenance facilities, modernization of stations, and system extensions. (major capital projects are described starting on page 11).

For the 10-year timeframe of this plan (FY15-FY24), fully funding the CIP would require approximately $9.6 billion. BART has previously identified approximately $320 million in capital funding and staff has identified an additional $4.5 billion in future funding that has been commited or can reasonably be assumed to become available to BART. This leaves a shortfall of approximately $4.8 billion over the next 10 years, approximately 50% of the total capital need. Other speculative sources have been identified buy are highly uncertain.

BART has also identified some capital needs and funding sources beyond the 10-year horizon of this plan. However, any detailed cost estimates are likely to be inaccurate due to the uncertainty of projecting need and funding availability that far into the future.

BART's Cumulative Funding Shortfall



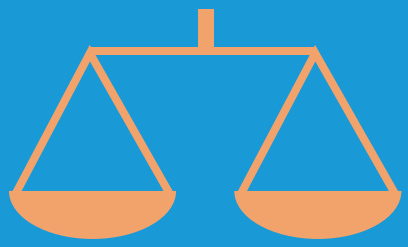
Funding Challenges

Key funding issues BART faces are:

- Competition for funding. BART is not the only agency facing funding challenges, which means that finding additional external funding sources for operating and capital programs remains limited and highly competitive.
- Operating an aging system while accommodating uncertain ridership increases. One of the key challenges that BART faces in the near term related to the service plan is the inability to increase peak service levels until the first of the new rail cars enter revenue service in FY18. In addition, Transbay Tube capacity cannot be increased significantly until completion of the Train Control Modernization Project (described on page 15). Should ridership grow substantially more than forecast before the arrival of enough new train cars, BART will have to keep older cars operating in revenue service longer than planned. Crowding could increase delays and make service less reliable. Investment in tools like the Strategic Maintenance Plan (SMP), which improves car reliability and availability for a relatively low cost, will become increasingly important in the coming years.
- Impacts of safety rule changes. BART is in the process of implementing a new and enhanced safety program that includes more restrictive operating rules to improve protection for employees in the BART right-of-way. The new program will reduce train speeds in work areas and thus impact on-time performance and reliability. As much as possible, BART will move scheduled maintenance work to non-revenue service hours, but even so, this will require a significant increase in the number of maintenance workers and other operating costs. Starting in FY15, BART added $5 million to its budget to address these rules, including 40 additional positions with ongoing annual costs; however, additional new investments, both operating and capital, are needed to fully address all safety initiatives and programs.
- Unexpected economic fluctuations. Operating forecasts are based on a number of assumptions. In particular, the ridership and operating financial forecast assume steady annual growth, whereas past experience suggests that over the next 10-years, the Bay Area is likely to experience both periods of higher-than-normal growth and recession or economic downturn. The actual financial outcomes are typically quite different from the projection, but these are fluctuations that cannot be accurately foreseen by BART at present.
- Misalignment between need and funding availability. Particularly important for BART's capital program, the timeline on which funding is expected to become available does not align with the projected timeline when the capital investment needs will arise, creating a more dramatic shortfall in the near term than the longer term.

BART is committed to the task of seeking additional funding though obtaining grants, working with regional partners, and pursuing additional funding sources to address its identified funding shortfalls. However, additional tools will be necessary to ensure the system's ongoing financial health.

System Reinvestment versus Expansion



Increasingly, BART faces a fundamental tension that pits reinvestment in the system against system expansion. It is often easier to generate support and attract funding for new projects than for maintenance projects because riders and other stakeholders tend to take for granted current infrastructure and service levels. However, system expansions actually increase maintenance and operating needs, which exacerbates existing deficiencies. Without proper upkeep of the system's infrastructure, the quality and reliability of the BART system suffers and expansion becomes increasingly untenable, creating a vicious circle.

OVERVIEW OF THE BART SYSTEM

BART operates trains daily on five lines connecting Alameda, Contra Costa, San Francisco, and San Mateo counties. The BART system and the mobility it offers to hundreds of thousands of Bay Area residents each day is the result of the integration between the system's physical infrastructure, its maintenance, the links to surrounding communities through a variety of access modes, and the coordinated efforts of all BART personnel.

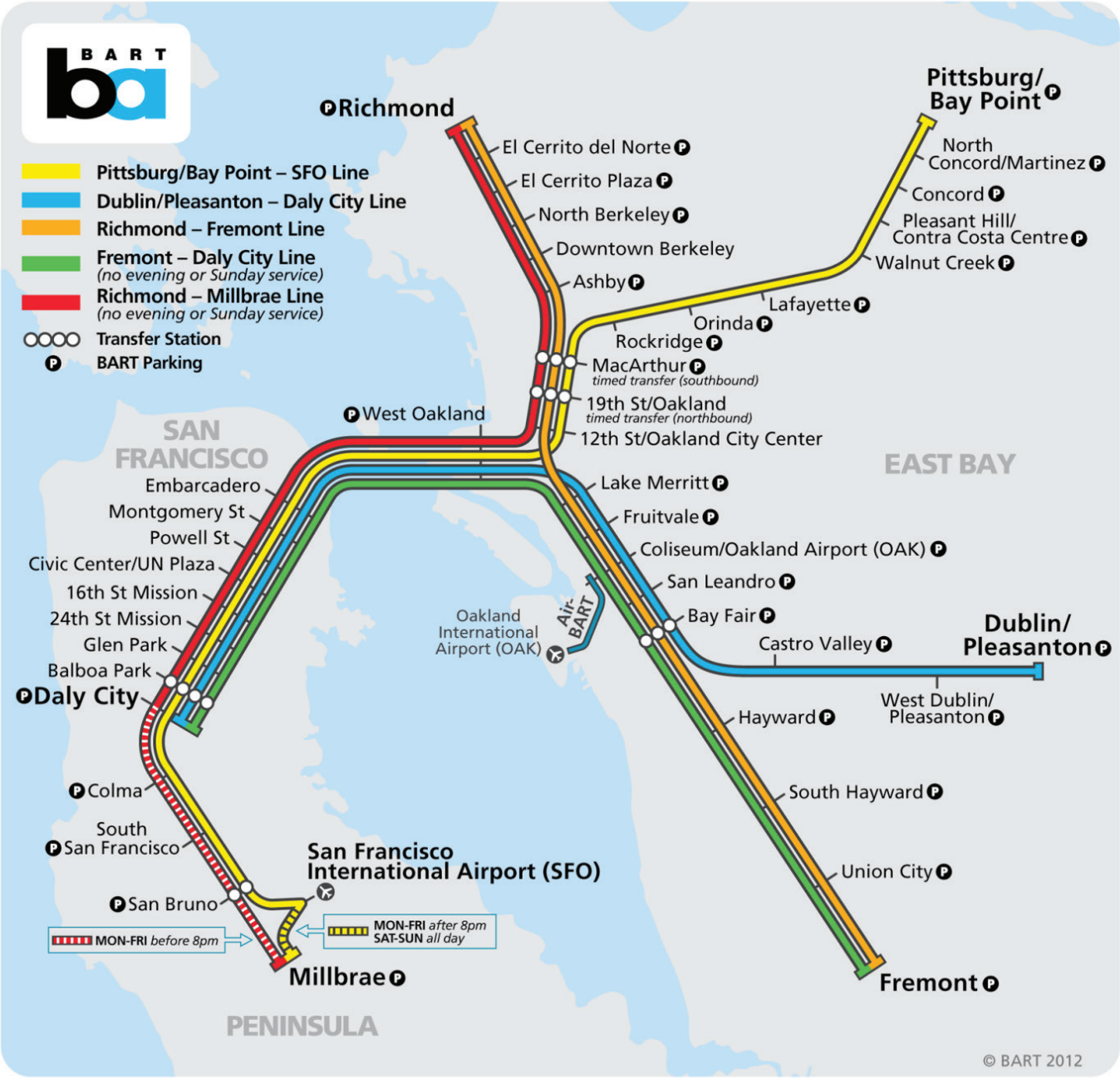
More than Trains and Stations: What Keeps BART Running?

The People of BART

Staff and Board: A total of 3,420 employees work to ensure reliable and efficient BART service each day. BART is governed by a Board made up of nine publicly elected directors that provide strategic and policy guidance to provide safe, reliable, customer-friendly, and clean regional public transit to Bay Area residents and visitors.

Customers: More than 400,000 riders use BART every weekday.

The BART System



Infrastructure and Service

BART Stations: BART has 44 stations: 16 at ground level, 12 elevated, and 16 subway stations. Every station has buildings, fare gates, fare collection equipment, elevators and escalators, plazas, waiting areas, and many other features that serve the public.

Station Access: There are a wide variety of facilities and services that allow access to BART stations, including bike facilities, bus and shuttle loading areas, passenger drop-off/pickup zones, taxi zones, and parking facilities. BART manages 47,000 parking spaces across 33 stations. Almost all BART stations have bike racks, over half of BART stations have bike lockers, and four, soon to be five, stations have bike stations. BART also has many features throughout the system to accommodate people with disabilities, such as tactile pathways, Braille signage, and audible announcements.

Trains and Other Vehicles: BART has a fleet of 669 rail cars, which are joined into three- to ten-car trains to provide daily service. BART staff also use over 30 other types of vehicles to maintain and service the BART system.

Tracks and Related Infrastructure: BART operates revenue service across 104 route miles: 37 miles in subways and tunnels, 23 miles on elevated structures, and 44 at ground level. The entire BART system, which includes non-revenue facilities such as maintenance facilities and tail tracks, contains over 500 linear miles of track. BART's 3.6-mile Transbay Tube, which connects the East Bay with San Francisco, serves half of BART's ridership each day.

Maintenance Shops and Yards: BART has five maintenance facilities, tools, and other equipment that support the upkeep and repair of the system. Facilities at Hayward, Concord, Richmond, and Daly City stations are used for vehicle maintenance. Major repairs are handled at the Hayward facility. Oakland Shops is used for non-revenue vehicles.

Train Control, Power Systems, and Communications: The Operations Control Center (OCC) in Oakland houses BART's central train control computer system that supervises train movements 24 hours a day. The OCC also houses systems that control ventilation, coordinate emergency response, and monitor system power. BART's "third rail" provides 1,000-volt DC electricity to propel trains at up to 80 mph. The OCC is critical to ensure the system's reliability and safety every day.

Security: The 296 women and men of the BART Police Department provide 24/7 police response to emergencies on the BART system. As the only dedicated transit police department in California, the BART Police force is unique in its exclusive focus on the safety and security of BART's passengers and employees. They use a community-oriented policing and problem-solving philosophy to build relationships with stakeholders and address the root cause of crimes or disorder on the system.

Administration: There are a variety of administrative activities and facilities behind the scenes that support BART, such as information technology equipment, customer service, and planning studies. In addition, BART has a robust emergency preparedness program, coordinated with adjacent jurisdictions, and a dedicated Safety Department.

Other Services

ADA Paratransit: Paratransit service is available to people who cannot use the accessible fixed-route services due to a disabling health condition. BART works together with other Bay Area transit agencies to coordinate regional paratransit travel in order to provide effective, accessible service to and from its stations.

BART'S RECENT ACCOMPLISHMENTS

In its over 40 years of service, BART has pursued the objective to deliver a high quality of service. It has achieved major accomplishments in evolving its stations as places and multimodal hubs, promoting seamless links with other modes of access, maintaining its infrastructure and fleet, and extending its service throughout the region. In the past five years, BART has made significant strides in a number of areas to improve customer convenience and to ensure that BART will continue to operate efficiently for its next 40 years and beyond.

New, Brighter, Clearer Station Signage: Most of BART's stations are over 40 years old. Through the ongoing Station Modernization Program, BART has installed new signage at Ashby, Daly City, Pleasant Hill/Contra Coasta Centre, Powell, and Union City to make stations easier to navigate and more aesthetically appealing.

Improved Bike Accommodation: Over the past two years, BART has implemented a more inclusive bike policy to allow bikes on all trains at all times, with very limited exceptions. Additionally, BART has opened three new bike stations to provide safe, secure, convenient bike storage at Downtown Berkeley, Embarcadero, and Ashby stations, along with 336 new bike lockers at 19 stations. A new bike station near the 19th Street Oakland station is scheduled to open by the end of Fall 2014.

Poster Art Program: BART's Poster Art Program continued to bring a dose of whimsy and wonder into BART stations. In 2010, a series called "First Ride" by Josh Ellingson showed fantastic, surreal transit trips that inspire a sense of wonder in kids of all ages. In 2012, Owen Smith contributed "Literary Journeys," depicting riders immersed in books by Dashiell Hammett, Jack London, and Amy Tan, with scenes from the books coming to life in the BART car around them.

Full Clipper Integration: In December 2010, BART fully transitioned to Clipper card fare technology. Clipper is a safe and convenient transit fare card that works on many other Bay Area transit systems, including AC Transit, SFMTA (Muni), Golden Gate Transit, and Caltrain. It can also be used to pay for parking at BART stations.

Preparing for the Next Big One: BART's Earthquake Safety Program has been steadily investing in crucial seismic upgrades to core infrastructure to preserve the strength of system structures in the event of an earthquake. The program will be completed in 2023.

Train Upgrades: To improve durability and customer convenience, new vinyl seats that are easier to clean and longer lasting than the existing fabric seats have been installed on approximately 300 train cars, with an additional 230 cars scheduled to get upgraded seats in FY15 to finish the program. Also, new composite flooring that is more durable and easy to clean than existing carpets has been installed in a total of 200 cars, with an additional 115 cars scheduled to get new floors in FY15 to complete the program.

System Expansion: West Dublin/Pleasanton, BART's 44th station (an "infill" station), opened in 2011 between the Dublin/Pleasanton and Castro Valley stations. BART has also made progress on the BART-to-Oakland International Airport, eBART to Antioch, and Warm Springs extensions during the past 5 years.

BUILDING A BETTER BART: MAJOR INVESTMENT INITIATIVES

BART's major investment initiatives are described on the following pages. These investments will first and foremost reinvest in the system to rebuild and upgrade aging infrastructure in support of continued reliability, high service quality, and safety of customers and employees. BART is also planning other major investments that will add core capacity, improve the sustainability of the system, modernize the existing system, and expand the system to serve new markets to support BART's evolution into a modern 21st-century system.

In particular, BART has identified three large, interrelated projects that have been determined to be the highest priority needs and essential to meeting BART's safety, reliability, capacity, and sustainability goals. These are known as the "Big 3," and form the basis of BART's Core Capacity Program. They are:

- → Fleet of the Future Railcars: A modern, expanded fleet of railcars to meet growing ridership demands, improve passenger comfort, and keep service reliable
- → Hayward Maintenance Complex (HMC): A new maintenance facility to maximize car availability by providing additional capacity to maintain and store the expanded fleet
- → Train Control Modernization Project (TCMP): An improved train control system to increase train frequency and put the expanded fleet in service both safely and reliably

While BART has worked closely with MTC to develop funding plans for these three important projects, some of the identified funding sources remain highly uncertain. A recent regional agreement authorizes BART to seek FTA New Starts Core Capacity funding for these projects as part of BART's Core Capacity Program.

Beyond these key capital investment initiatives, BART must fund the ongoing operation of the system. The future operating plan reflects continued growth in BART ridership, though at a slower pace than in FY12 and FY13 when growth exceeded 6% a year. In addition, it includes the four new extension projects that are scheduled to open in the next 10-years:

- → BART-to-Oakland International Airport: Opening FY15 (fall 2014)
- → BART to Warm Springs (WSX): Opening FY16
- → East Contra Costa County (eBART): Opening FY18
- → Silicon Valley Berryessa Extension (SVBX): Opening FY18 [not currently included in the SRTP financial projections because project capital and operating costs are funded by Santa Clara VTA]

Fleet of the Future

The Fleet of the Future is a $3.3 billion project to expand BART's current fleet from 669 cars to 1,000 cars. This will improve the reliability of BART's fleet, decrease maintenance costs, relieve crowding, and help meet growing demand associated with regional population growth and system expansions.

The combination of a 1,000 car fleet and a new train control system will allow BART to run up to 30 trains per hour per direction through the Transbay Tube, transporting 30,000 peak direction passengers each hour (a 43% increase over today's 21,000) and improving service frequencies for BART riders.[1]

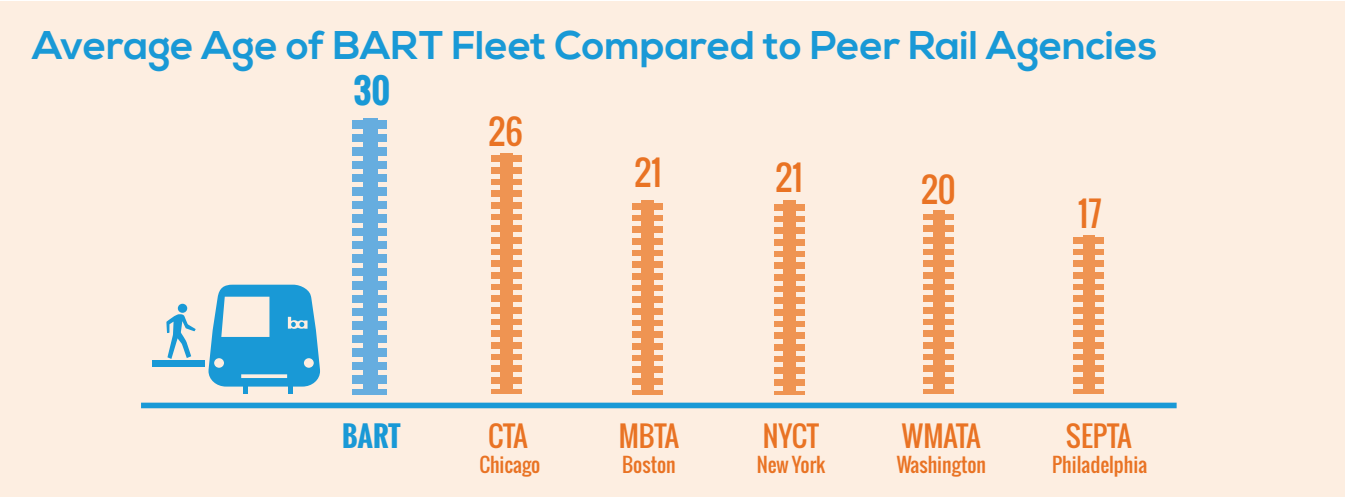
Over 17,000 customers provided input on the new cars during the design phase.

1 Sustainable Communities Operations Analysis, BART. 2013

Why Invest in New Cars?

BART is currently running the oldest rail fleet in the United States. BART began service over 40 years ago and the original cars still comprise the majority of BART's fleet today. In the 1990s, BART implemented a midlife overhaul program, a cost-effective way to extend the life of the cars, reflecting BART's commitment to be an exceptionally good steward of public funds. Now, with an average fleet age of 30 years, the rail car fleet needs to be replaced. This aging fleet is more susceptible to breakdowns, which disrupt service. The technology in these older cars is outdated and the vehicles are no longer produced, which adds to the repair challenges and makes them more costly to repair and maintain.

BART needs more capacity to keep up with projected demand: BART is already crowded and daily ridership is projected to increase by 25% to nearly 500,000 by 2025 and by 50% to 600,000 by 2040. The current fleet is not capable of handling this many passengers. The new rail cars, each of which will be able to carry more passengers, will enable BART to meet this growing demand.



BART's New Train Cars

The new cars will be:

→ **Quieter:** "Micro-plug" doors will reduce noise

→ **Cooler:** Cooling systems will distribute air directly to the ceilings, making it more comfortable for standees on hot days

→ **Energy Efficient:** The lightweight cars will be more sustainable with extremely efficient LED lighting, daylight sensors, white roofs to deflect heat and light, and advanced propulsion and braking systems

→ **Cleaner and more comfortable:** Padded seats will be covered with easy-to-clean fabric

→ **Easy to use:** Digital screens and destination signs will reflect color coded BART lines as used in the BART system map, and next stop information will be readily available via automated announcements and the digital screens

→ **Easy to board:** The new train cars will have 50% more doors than the current cars, making it faster and easier for customers to get on and off

Funding and Phasing

The total cost for 1,000 rail cars is estimated at $3.3 billion. BART and MTC have developed a funding plan that identifies potential future funding for 850 of these cars, with 18% from BART funds and the remainder from MTC and other federal and local funding sources. Not all of these funding sources are secured and some are highly uncertain. Furthermore, the final 150 cars are unfunded as of now.

To date, BART has ordered the first 775 cars. The new train cars will be phased into the existing fleet beginning in 2017. Delivery of the 775th car is scheduled for fall 2021. A new contract could be required to order the additional cars.

BART will continue to aggressively pursue funding for the full 1,000 car fleet. Although acquisition of cars beyond 775 may require a new, separate procurement, which could incur significant additional cost per car, this SRTP/CIP makes the same cost assumptions as the current 775 car purchase for planning purposes because no estimates of the potential cost increase are available at this time.

Maintenance and Train Control

BART has prioritized three interrelated capital investment initiatives to ensure the system can safely, efficiently, and comfortably serve current and new riders. They are known as the " Big 3." The modern railcar fleet has been described previously. Described here are the remaining two: an improved train control system to enable trains to operate more frequently and a new maintenance facility to maintain and store the expanded fleet.

The "Big 3" together can address some key current bottlenecks that hinder BART's ability to meet current and future ridership growth:

→ The Transbay Tube and Train Control System: A single two-track tunnel provides the only rail connection between the financial and cultural center of San Francisco and the 2.7-million person East Bay. Due to the system's aging train control system, the Transbay Tube is only able to safely accommodate about one train car per 2.5 minutes, equating to 23 trains per hour with capacity for 21,000 passengers. Peak demand on the system is already approaching this capacity.

→ Maintenance Facilities: BART has limited space to maintain and repair railcars and other equipment, reducing its ability to quickly put trains back into service, and limiting the system's ability to operate at maximum capacity during peak periods.

TRAIN CONTROL MODERNIZATION

A modern, improved train control system will allow BART to safely operate more frequent service. A train control system consists of both hardware and software that are used to ensure safe operation of the system. It monitors train location, ensures sufficient distance between trains, manages train movements, and helps staff to analyze and report on any issues. The Train Control Modernization Project (TCMP) entails removing aging train control equipment from the BART system and upgrading to a new system. BART staff is recommending a Communication-Based Train Control (CBTC) system that will improve the reliability of the system, decrease the runtime of trains between stations, and allow trains to run closer together.

Why Invest in Train Control Modernization?

Modernizing BART's train control system will allow trains to operate at more closely spaced intervals and at faster speeds, thereby increasing the BART system's capacity to carry passengers. A modernized train control system will enable BART to meet projected transbay demand of over 30,000 passengers per hour in the peak, compared to today's approximately 21,000 riders.

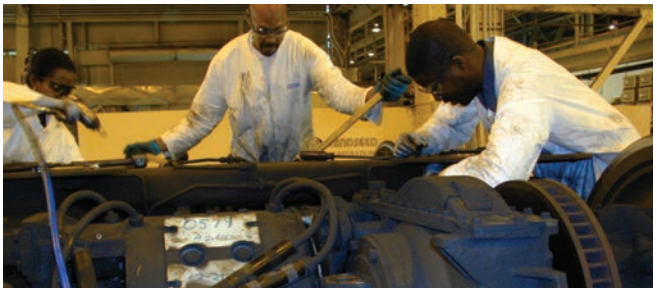
Funding and Phasing

The TCMP is estimated to cost $700 to $900 million. More detailed and accurate cost estimates will be available once final design is complete.

As part of the MTC Core Capacity Challenge Grant program, a multifaceted funding plan has been adopted that meets a significant portion, if not all, of this need. Funding sources could include FTA New Starts Core Capacity grants. As development of the replacement train control system progresses, significant effort will be required to ensure that the varied sources identified within the MTC program yield the targeted funding amounts and, if necessary, identify any additional resources to fully fund the project. Thirty-nine million dollars have already been secured and future anticipated revenues have been identified to cover much of the remainder.

Once a contract is awarded for the project, it will take approximately seven to eight years to fully implement and complete. Implementation will start in the core so that increased transbay service capacity can be achieved early in the project.

BART is also investing in an initiative called "BART Metro" that is dependent on and complements implementation of the "Big 3" projects. It includes both near- and mid-term improvements such as service changes and changes to tracks and stations that will increase BART's flexibility, efficiency and cost-effectiveness, and allow for increased train frequency in high demand areas.



HAYWARD MAINTENANCE COMPLEX

BART already has one maintenance shop and yard facilities in Hayward, which it plans to expand to accommodate the growing fleet and the system expansions currently underway, including the Santa Clara Valley Transportation Authority's (VTA) BART Silicon Valley project. The HMC project has two components:

- → Reconfiguration of the existing Hayward Yard
- → Acquisition of three adjacent properties on the west side of the existing Hayward Yard for a larger primary repair shop, a new component repair shop, a vehicle overhaul shop, a new central parts warehouse, and a new maintenance and engineering repair shop

Why Invest in The Hayward Maintenance Complex?

BART needs increased maintenance capacity as part of its Fleet of the Future program. The HMC will ensure that BART's maintenance and repair capacity is sufficient to support the new railcar fleet for both the current system and system expansions.

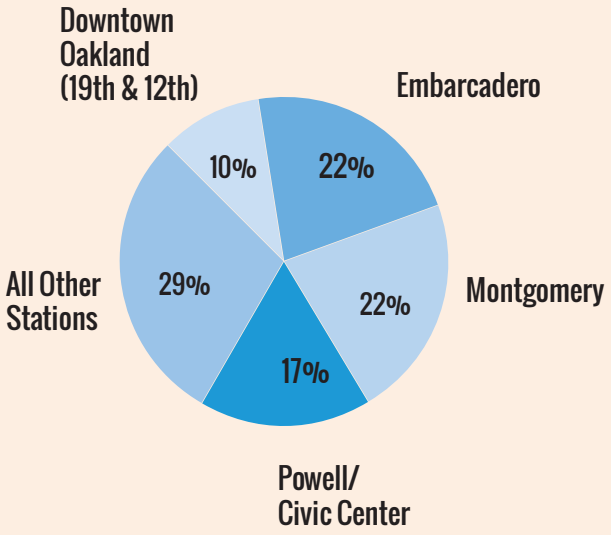
Funding and Phasing

The HMC will cost approximately $432 million, and a funding plan has been developed by BART and MTC to cover the full project cost. Creation of the HMC is jointly supported by BART and VTA. Environmental clearance for the HMC project has been approved, cost-sharing agreements with VTA have been executed, and design work is currently in progress.

BART Metro: Core Capacity and Efficiency

BART Metro is a package of improvements designed to allow BART to evolve to better serve commuters during peak times and relieve overcrowding, while also enabling robust, cost-effective off-peak service in high demand areas. BART Metro is a concept that was first proposed in the San Francisco Bay Area Regional Rail Plan in 2007 (MTC). It has since been refined through BART's Sustainable Communities Operational Analysis in 2013-14. Together with the "Big 3", described previously, the improvements described here comprise BART's Core Capacity Improvement program.

BART System Demands



Source: Morning Peak Station Exits
6 A.M. - 10 A.M. May 2014

Why Invest in Core Capacity and Efficiency?

BART Metro goes beyond the "Big 3" to address some additional key elements of the BART system which limit the system's ability to expand ridership and undermine system efficiency, including:

→ **Downtown San Francisco Stations:** Peak-period station use is concentrated at a few stations, in particular Embarcadero and Montgomery: 22% of BART users use Embarcadero, and 22% use Montgomery. These stations cannot accommodate significantly more riders during peak commute hours without incurring unacceptably long wait times for riders exiting trains and leaving the platform.

→ **Two-Track System:** BART is largely a two-track system, with one track in each direction. This does not allow for redundancy, so if anything goes wrong, such as a train breakdown or an obstruction on a track, a large portion of the system is forced to shut down, impacting riders far from the incident.

→ **Lack of Train Turnarounds:** Ridership is not evenly distributed across the system. There is higher and more consistent, all-day demand on the core of the system. However, there are few places where trains can turn around to allow for higher frequency in the core. This means that empty BART trains often have to run long distances before they can turn around and serve higher-demand core areas, which is highly inefficient.

BART Metro Projects

BART Metro projects include:

→ **Turnbacks** that allow for trains to be distributed more efficiently to high-demand parts of the system, especially at peak hours

→ **Increased train storage capacity** at key locations in the system to ensure that BART trains are readily available to provide service where and when there is the most demand

→ **Improved protection of BART tracks** to avoid obstructions from foreign objects, which will decrease the incidence of service disruptions and allow trains to operate at higher speeds

→ **Modifications** at Embarcadero and Montgomery stations, such as additional escalators, elevators, waiting space, and fare payment entry points that will allow more people to comfortably access these stations at peak periods

Funding & Phasing

The first phase of BART Metro is a $58 million program of improvements. Several funding sources have been identified for the highest priority components of the BART Metro project including funds from MTC, the California Transportation Commission, and the Alameda County transportation sales tax. No environmental review or engineering work has been initiated to date. Implementation of BART Metro will be coordinated with implementation of the "Big 3" as the BART Core Capacity Improvement Program.

New Train "Turnbacks" for Improved Efficiency and Flexibility

Angelo DeSantis

Station Modernization: Creating Great Places

The Station Modernization Program will invest resources into existing stations and surrounding areas to increase capacity in order to serve more riders throughout the day and enhance the quality of life around the stations. In combination with BART's collaborative station area planning work and Transit Oriented Development program, these station improvements will help make Plan Bay Area a reality.

Station Modernization will improve the look, feel, efficiency, and usability of BART stations for riders, as well as enhance the safety and comfort of the work environment for BART employees. It will address all aspects of the stations, including buildings, escalators and elevators, circulation and signage, plazas and waiting areas, climate control and ventilation, lighting and ambient environment, and other station equipment upgrades.

Why Modernize the Stations?

Stations do more than provide the passenger interface between BART trains and the surrounding communities. If done well, stations create significant economic benefits for communities around the stations, becoming a focal point for thriving businesses and new homes. BART stations can also be memorable places, creating a sense of identity and pride for surrounding neighborhoods. As the region becomes more reliant on transit, it is critical to transform stations so they more seamlessly connect to communities, create great places, and make the transit network function well. Each station needs to add positively to the vibrancy of neighborhoods.

Stations are a rider's introduction and entry point to the BART system. However, like much of the rest of the system, many of BART's stations are 40 years old and are in need of significant improvement. Through intensive use over the years, they have become dirty and cluttered: items have accumulated in and around the stations, such as newspaper boxes, pay phones, and retail kiosks, many of which may not be necessary to BART riders or employees.

Ensuring that stations provide a high quality arrival and waiting experience, function properly, are easy to navigate, and are pleasant and safe places to be is critical to customer and employee satisfaction and to support increasing ridership on the system. There are also opportunities in stations to modernize lighting and become more energy efficient.

Stations are also the workplace for hundreds of BART employees who are the primary face of BART for passengers. Currently, many employee facilities are inadequate. Upgrading employee workspaces and equipment will ensure they can efficiently, safely, and comfortably do their jobs and continue to provide high quality customer service to BART's riders.

Cleaner, Brighter, Easier to Use BART Stations

The Station Modernization Program seeks to invest in the core BART network, through three coordinated improvement efforts:

→ **Early Wins** improvements are low-cost, easy-to-implement changes at BART stations with an emphasis on improving the customer experience and employee work environment (deep-cleaning, de-cluttering, and improving or creating new Station agent break rooms).

→ **Systemic Investments** address critical deficiencies at multiple stations to advance the Building a Better BART strategy, e.g. improving signage, replacing escalators, upgrading emergency/security lighting, replacing fire alarms, reducing intrusion by pigeons, or improving BART's street-level entryways/canopies.

→ **Gateway Stations** are intended to be "showcase" stations that will receive a comprehensive transformation. This effort will thoroughly assess station needs and prioritize a set of improvements designed to make substantive upgrades that can be used to leverage funding. The first round of Gateway Stations is expected to include four to six stations; as funding becomes available, BART envisions that all stations will eventually be upgraded. The first three stations selected as pilots are El Cerrito del Norte, Powell Street, and 19th Street. Lessons learned at these pilot stations will inform future station renovations.

Creating great places at BART stations through beautification, improved access, enhanced capacity, and increased safety should all positively impact riders and surrounding communities. Each station modernization effort will include a unique set of improvements that respond to the specific local context and conditions at that station.

Funding and Phasing

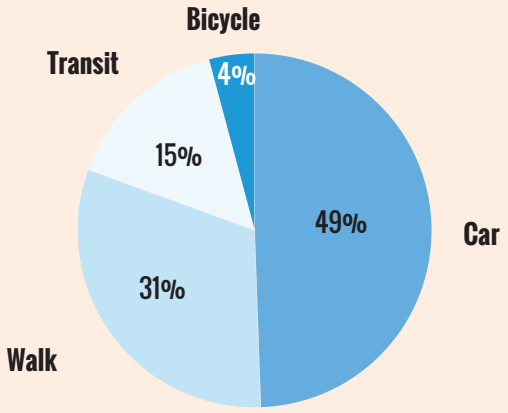
Funding for station improvements is expected to be approximately $240 million, with $150 million from California State Proposition 1B, $10 million from BART capital allocations (from parking revenues), and $80 million from dedicated local funding. For planning purposes, it is expected that roughly 10% of funds will go to Early Wins, 45% to Systemic Investments, and 45% to Gateway Stations. The Station Modernization Program is intended to leverage BART funds to access other public or private funds.

Paul Sullivan

Improving Access & Accessibility

BART riders access stations in many ways, including local transit, shuttles, taxis, bicycles, and private automobiles. Plan Bay Area projects tens of thousands of new BART riders in coming years, many walking, biking, or taking transit from new developments in neighborhoods immediately surrounding BART stations. To ensure convenient, seamless access for current and future riders, BART is engaged in several initiatives to improve the bicycle and pedestrian infrastructure at stations and coordinate with other transportation providers to improve shuttle and transit connections.

How Riders Access BART from Home



Why Invest in Multimodal Access?

Over time, BART has evolved from a largely park-and-ride commuter system to a system that is accessed using many different modes of transportation. Currently, over 50% of riders access BART from home by walking, transit or biking. Improving the ease and convenience of accessing BART by walking, transit, and biking will positively benefit surrounding communities and maximize riders' flexibility in choosing how to access BART.

As ridership grows, investing in high quality multimodal access to BART stations is more critical than ever. Changing demographics and more compact development patterns are changing the way people get around throughout the Bay Area. Further, BART's capacity to provide automobile parking for passengers is increasingly limited due to land constraints, competing transit-oriented development prospects, and sustainability goals.

Investments in Access

Station Access

BART staff recently completed a Pilot Access Study at stations on the inner C-line from Orinda to Concord. The project evaluated a wide variety of strategies for using expected parking fee revenue to improve non-automobile access to the stations. The project identified a set of cost effective investments for Contra Costa County stations in the short-, medium-, and long-term. It also identified a group of policy questions that must be addressed before BART can begin to deploy a similar approach system-wide.

BART's Bicycle Program

BART's bicycle program is guided by the 2012 BART Bicycle Plan, which aims to double the percentage of riders that access BART by bicycle by 2022. The BART Bicycle Program seeks to:

- → Improve bicyclist circulation in and around stations
- → Ensure sufficient secure parking for bikes
- → Enhance the environment for bicycling beyond the boundary of BART stations through working with community and city partners
- → Make room for bicycles on BART trains
- → Raise awareness about the benefits of bicycling as a means to access stations

Transit and Shuttles

BART coordinates with and contributes millions of dollars annually to other transit operators who provide feeder services to ensure that passengers can easily access BART via transit. BART provides and maintains bus loading areas at stations for its public transit partners that are equipped with shelters, some of which have real-time departure information.

The use of shuttles to access BART has risen dramatically in recent years. Currently, over 100 shuttles make stops at BART stations; however, shuttle movements are not coordinated by BART. This disrupts traffic circulation in and around stations and results in passengers getting picked up and dropped off at locations that are not always safe. BART is working on several initiatives to improve shuttle access and coordination, including:

- → Establishing cooperative relationships with shuttle operators
- → Creating a dedicated area for shuttle stops
- → Reconfiguring bus/shuttle dropoff areas to increase capacity
- → Considering a permit system for shuttles to facilitate better communication and reduce disruptions and conflicts

Intermodal Areas

BART has curbside areas at most of its stations that provide access for pedestrians, transit, shuttles, taxis, passenger dropoffs and pickups, and ADA-accessible loading. BART is investing in projects to upgrade and renovate these intermodal areas at Downtown Berkeley, Richmond, and Lafayette stations.

Americans with Disabilities Act: Making BART Accessible for All

In compliance with the federal Americans with Disabilities Act (ADA), the BART system has several features that make it easy for seniors and people with disabilities to use the system. These include elevators to all levels of a station, designated priority seating near train doors, level boarding from the platform to all trains, Braille labels of important features in the system, audio capabilities throughout the system for the hearing impaired, and textured tiles along the length of train platforms to warn passengers that they are close to the platform edge.

BART also provides ADA paratransit service to eligible individuals whose disability prevents them from accessing, boarding, or riding BART trains. Service is provided in lift vans by East Bay Paratransit and through partnerships with other local agencies. In general, eligible passengers must make advance reservations to use the service.

Recent and ongoing initiatives to improve BART's accessibility include:

→ Installing detectable pathways throughout the BART system for passengers with sight impairments (usually pathways with raised yellow tiles)

Eric Fischer

→ Creating safer stairways through the addition of yellow slip-resistant traction strips on the edge of each stair

→ Implementing better signage on station platforms

→ Piloting a new video relay system that will provide on-call American Sign Language interpreters through video feed and hearing loops to enhance the audio information for passengers with hearing impairments

Funding and Phasing

BART estimates that all desired upgrades and improvements to access infrastructure through 2040 could cost over $800 million. Approximately $40 million in possible funding has been identified, but a large shortfall still remains.

BART receives about $5 million per year through the Federal Transit Administration (FTA) Section 5307 funds that are designated for ADA improvements. BART usually uses this source to fund any improvements that are required by FTA's Triennial Audit, other upgrades necessary to maintain compliance with the ADA, or other high priority ADA projects.

BART System Expansion

BART is expanding! Extensions to Oakland International Airport, southern Alameda County, and eastern Contra Costa County are underway and expected to open in the next three years, and several other expansions are under consideration.

In coming years, BART will serve a much larger area and meet the needs of an expanding market. Some extensions will use new technologies, which will seamlessly connect with the existing system, and will continue to provide the level of reliability and quality that BART passengers expect. Most BART extension projects are funded collaboratively by BART and the new communities they will serve.

BART's System Expansion

Why Expand the System?

BART's extensive and reliable service connects communities throughout the Bay Area, improving accessibility for commuters and bringing visitors to many of our region's top destinations. There are two regional rail gaps that have long been considered priorities for the Bay Area:

→ **Convenient rail service to the Bay Area's international airports.** BART to SFO was completed in 2003 and a direct connection to the Oakland International Airport has long been desired.

→ **Direct connection to San Jose.** San Jose is the largest city in the Bay Area and third largest in California. A direct rail connection from downtown Oakland, downtown San Francisco, and other East Bay centers to downtown San Jose is a key missing link in BART's system.

Other system expansions are often driven by community desires to provide more travel options for residents, employees, and tourists. BART is currently working with local communities and regional partners to understand transit needs in several communities and develop solutions that fit the region's growing desires for sustainable transit access and mobility. Consistent with Board policy to examine corridor-appropriate technologies, two of the projects are using non-BART technology.

Behind the scenes of BART-to-Oakland International Airport project construction (wheelhouse motor drives)

BART-TO-OAKLAND INTERNATIONAL AIRPORT (OAK)

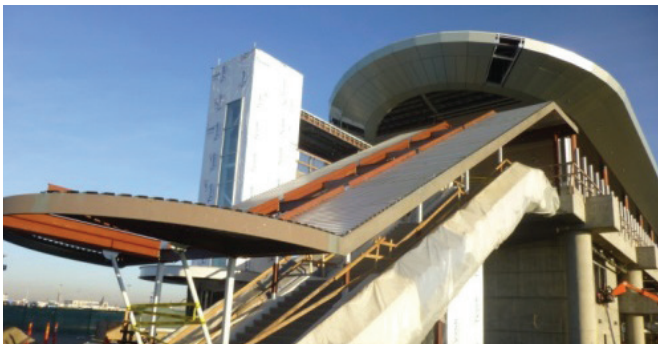
In fall 2014, BART will welcome the next addition to the system: a new service that links the Oakland International Airport with Coliseum station. Passengers will be transported on a mostly elevated, driverless people-mover from Coliseum station to the Airport along the Hegenberger Road business corridor.

The people-mover ride time will be approximately 8.5 minutes. The total trip will take 12 to 15 minutes, including the walk from the Coliseum station platform, the wait time, and the ride to the airport terminal doors. The total BART-to-OAK trip time will be approximately half as long as the current AirBART bus total trip time.

The BART-to-OAK project meets several needs. It provides a high-quality, reliable connection for air travelers that will not be impacted by the traffic congestion and Coliseum events that impact existing modes (AirBART, AC Transit buses, taxis and airport shuttles). It will also provide service for more airport passengers and future public and private development that is expected in the area.

Funding and Phasing

The BART-to-OAK Project will cost approximately $484 million and is already fully funded.



BART TO WARM SPRINGS

BART is building a 5.4-mile extension from the existing Fremont station to a new station in the Warm Springs District of South Fremont. This project is underway and projected to open in December 2015. The Warm Springs/South Fremont station and the surrounding site are being designed to promote multimodal access and to accommodate potential future transit-oriented development. This project extends BART to the border of Santa Clara County, setting the stage for a longer extension to San Jose and Santa Clara, described below.

Funding and Phasing

The Warm Springs extension will cost $767 million and is fully funded.

eBART

The eBART (East Contra Costa BART Extension) project is a 10-mile, one station extension of BART that will create a link from Pittsburg/Bay Point to Antioch in eastern Contra Costa County. The project will utilize a cost-effective technology called DMU (diesel multiple unit) trains that use clean-diesel technology and can carry 300 to 400 people in each two-vehicle train. Passengers will use a new platform at the Pittsburg/Bay Point station for a direct cross-platform transfer to the eBART train.

The eBART project will carry as many people as an additional lane of Highway 4, reduce greenhouse gas emissions by 260,000 pounds per day, and improve freeway operations by offering people an efficient alternative for travel to eastern Contra Costa County.

Funding and Phasing

The eBART project will cost approximately $503 million. The project is fully funded through a partnership between Contra Costa County, BART, regional bridge tolls, the State of California, and East Contra Costa County communities. eBART is scheduled to begin service in December 2017.

BART SILICON VALLEY

Through a partnership between BART and the Santa Clara Valley Transportation Authority (VTA) the BART system is expanding to serve Silicon Valley. Building on the Warm Springs extension, this two-phase project, called BART Silicon Valley, will deliver service from Fremont to Santa Clara, west of San Jose. It is managed and funded collaboratively by BART and VTA. The complete 16-mile extension will provide a fast, reliable and convenient transportation alternative to driving in two of the most congested highway corridors in the Bay Area, I-880 and U.S. 101.

The first phase, Silicon Valley Berryessa Extension (SVBX), is a 10-mile, two-station extension to Milpitas and the Berryessa area of north San Jose. This phase is under construction and anticipated to open in FY18.

The future phase envisions bringing BART through downtown San Jose and west to the Santa Clara Caltrain station. This six-mile, four-station extension will include a five-mile subway tunnel through downtown San Jose. Construction on the future phase will begin as additional funding is secured.

Funding and Phasing

The total capital cost of the first phase, SVBX, is estimated at approximately $2.3 billion. The future phase is largely unfunded, but is a priority of by Plan Bay Area. VTA is working on securing funding for the future phase. SVBX was funded through multiple revenue streams, including:

- → Santa Clara County Measure A, the half-cent sales tax passed in 2000 and other local sources (51%)
- → State of California Traffic Congestion Relief Program (10%)
- → Federal grants including the New Starts program (39%)

EXTENSION IDEAS UNDER STUDY

There are several additional long-term extension concepts that are being studied. These include extending the Dublin/Pleasanton line to Livermore, a "wBART" extension from Richmond to Hercules, and an extension of eBART from Antioch to near Brentwood.

CONNECTING TO LIVERMORE

In addition to this regional-scale analysis, BART has initiated a project-level environmental review for the Livermore corridor. The District is analyzing transit alternatives in the I-580 corridor beyond the existing Dublin/Pleasanton BART station.

CONCLUSION: ALLOCATING LIMITED RESOURCES

BART faces serious funding challenges and will have to make hard choices in coming years. The agency will have to weigh the benefits of investments in state of good repair, capacity, and expansion to ensure the system's integrity and ability to adapt, modernize and grow to support the changing and growing Bay Area in coming years.

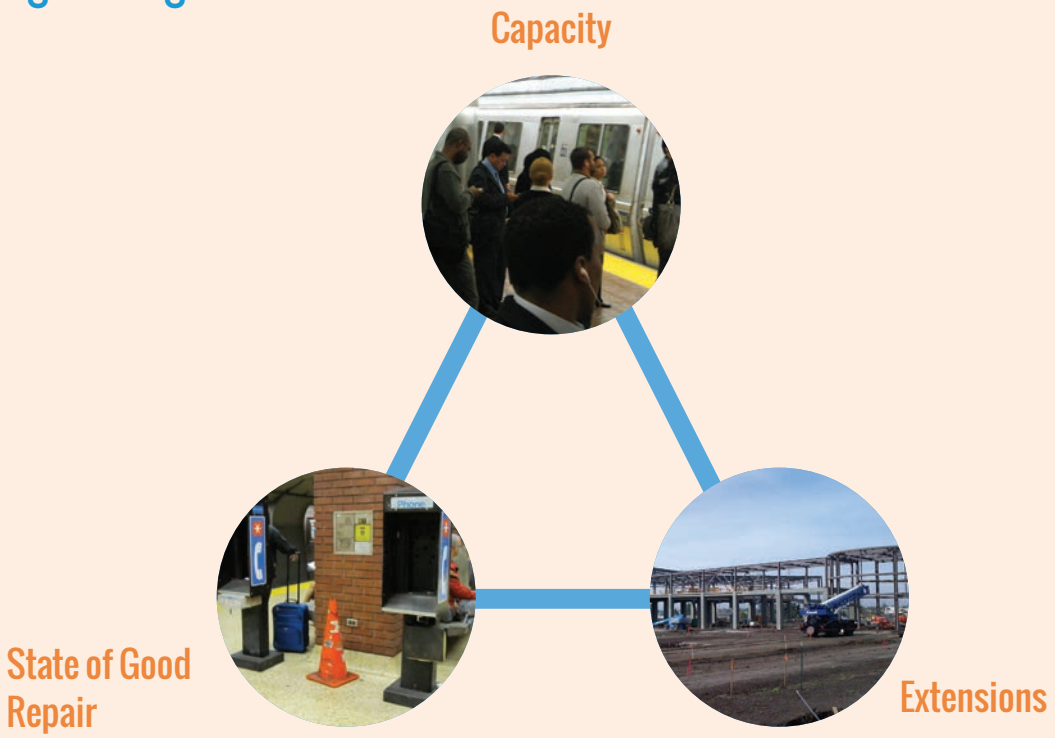
BART staff has undertaken a series of simultaneous system assessments and planning efforts to ensure that the system's needs are known, including examining the needs of individual stations, rolling stock, and system infrastructure; and assessing needs for enhanced capacity and system modernization. Staff is actively working on a number of initiatives to ensure that limited revenues are allocated to the highest value projects.

BART Vision Study

Over the past 40 years, BART focused on building out the vision of its original 1958 plan. That work is largely done, at least for the counties in the BART district. To guide the next 40 years of investment, BART needs a new vision, one that is tailored to the region's current economic ambitions, demographic changes, sustainability goals, and fiscal realities. BART's new vision must focus BART's limited resources to help the region best achieve its goals.

The BART Vision Study grew from the BART Metro work. It looks farther into the future, examining how new lines and stations can help BART address its critical capacity and state-of-good-repair needs, better connect to other transit services, and provide the best service for the greatest number of people within its financial constraints. The study will look at infill station opportunities as well as potential new lines, particularly in the transbay corridor and most transit-oriented growth areas. The Vision Study is intended to recommend three to five priority projects for more detailed analysis.

Finding the Right Balance



Comprehensive Asset Management Program

To ensure that system reinvestment, risk, and financial stability are adequately considered, BART staff has developed a comprehensive Asset Management Program (AMP) and a Budget Project Governance Group to guide BART's long-term financial plan and ensure it adequately addresses system reinvestment, minimizes risk, and maintains financial stability. The AMP includes a broad risk framework that assesses the likelihood of near-term failure for each asset and the consequent impact on the BART system, rather than merely looking at the assets age or condition as had been done in the past. For BART's annual capital budgets and long-term financial plans going forward, the AMP will allow staff and the Board to take a systematic, risk-focused approach to funding allocations, screening all projects and operating needs, and prioritizing investment of scarce resources accordingly.

Other Decision-Making Factors

The General Manager, staff, and the BART Board also take a series of other critical factors into consideration when making funding decisions, for example:

→ **Goals.** A future update to BART's Strategic Plan will likely include a comprehensive review of the agency's goals, which will help guide how BART invests in its future.

→ **Equity.** BART takes very seriously its commitment to ensure equitable and just investments that support customers throughout its system. Through the federal Title VI program and BART's own environmental justice policies, equity is thoroughly considered in BART's planning and funding allocations.

→ **Other Project-Specific Factors.** BART also considers issues such as whether a project is already underway and needs ongoing funding to continue implementation or whether projects are dependent on one another and need to be implemented in concert.

THE CHALLENGE

To maintain the Bay Area's economic competitiveness and long-standing desirability as a place to live and work, it is vital to invest in the future of BART. Just as the founding of the system was a major regional initiative that has transformed the Bay Area, addressing the challenge of BART's operating sustainability and funding shortfall in the face of significant growth must also be a regional priority.

Together we can, and must, Build a Better BART to support a vibrant future for our region.