300 Lakeside Drive, P. O. Box 12688, Oakland, CA 94604-2688

#### NOTICE OF MEETING AND AGENDA BOND OVERSIGHT COMMITTEE

Wednesday, July 26, 2017 4:00 p.m. – 6:00 p.m.

COMMITTEE MEMBERS: Marian Breitbart, Michael Day, Daren Gee, Christine D. Johnson, Michael McGill, Anu Natarajan, John Post

Meeting of the Bond Oversight Committee on Wednesday, July 26, 2017, at 4:00 p.m. The Meeting will be held in the 1800 Conference Room, 300 Lakeside Dr., 18<sup>th</sup> Floor, Oakland, California.

#### AGENDA

- 1. <u>CALL TO ORDER</u> A. Roll Call.
- 2. INTRODUCTION OF COMMITTEE MEMBERS
- 3. INTRODUCTION OF BART STAFF
- 4. <u>COMMITTEE ROLE</u>
  - A. Controller-Treasurer's Office is official point of contact for all matters
  - B. Audio recording of meetings
  - C. Meeting Agendas/Minutes
  - D. Annual Report writing and approval process
  - E. Request for photos and bio for website
  - F. Clipper Card/Travel reimbursement
  - G. Introduce process of selecting Committee Chair and Vice Chair
- 5. PRESENTATION: MEASURE RR OVERALL PROGRAM
- 6. PRESENTATION: STATUS OF BONDS SOLD
- 7. <u>Q&A WITH STAFF</u>
- 8. STAFF REQUEST TO PRESENT ASSET MANAGEMENT AT NEXT MEETING
- 9. SETTING NEXT MEETING DATE AND AGENDA
- 10. PUBLIC COMMENT

Please refrain from wearing scented products (perfume, cologne, after-shave, etc.) to this meeting, as there may be people in attendance susceptible to environmental illnesses.

BART provides services/accommodations upon request to persons with disabilities and individuals who are limited English proficient who wish to address BART Board matters. A request must be made within one and five days in advance of a Board or committee meeting, depending on the service requested. Please contact the District Secretary's Office at (510) 464-6083 for information.



# Measure RR Bond Implementation



Measure RR Bond Oversight Committee July 26, 2017



- BART System Overview
- Measure RR Program Detail
- Near Term Cashflow Needs

#### San Francisco Bay Area

## **Our Region**

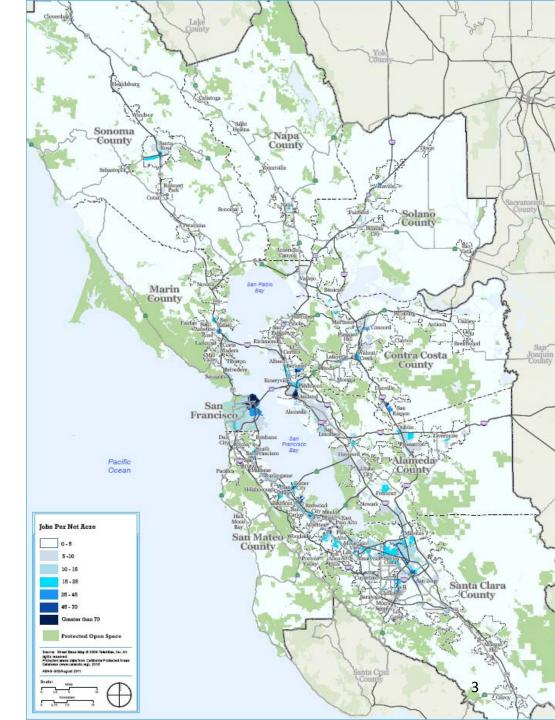
- 7 million people
- 9 counties
- Three major cities:
  - 1. San Jose
  - 2. San Francisco
  - 3. Oakland

#### • Regional Government:

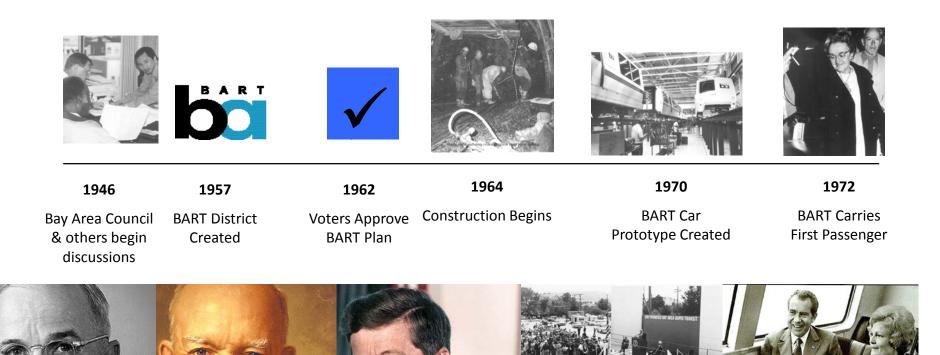
- Metropolitan Transportation Commission
- Association of Bay Area Governments
- Bay Area Air Quality Mgmt District
- 28 transit operators

#### • International destinations:

- San Francisco
- Silicon Valley
- Port of Oakland
- Stanford University
- University of California ,Berkeley
- Sandia Labs
- Lawrence Livermore National Labs
- Lawrence Berkeley National Labs
- Wine Country



## **50+** Years of History, 40+ Years of Service

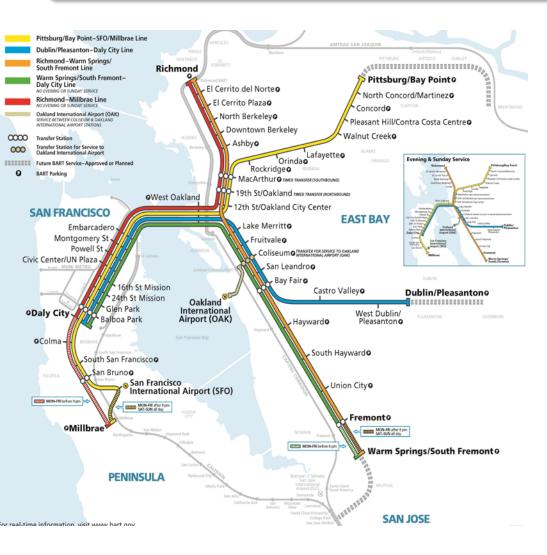


1961-196

mh

1953-1961

# **BART Basic Facts**



- Regional rail rapid transit
- Elected Board of Directors: 9
- Comprised of 3 Counties:
  - Alameda, Contra Costa & San Francisco
  - Serves San Mateo
  - Will serve Santa Clara in 2017/2018
- 433,000 weekday riders (FY16)
- 109 total heavy rail track miles
- 5 lines, plus BART to OAK
- 46 stations
- 48,000 parking spaces
- FY18 Adopted Budget:
  - Operating: \$921M
  - Capital: \$998M
- Rail Farebox Ratio (FTA FY15): (Fare Revenue/Operating Costs)
  - 80% (Highest in the US)

### **DO** BART Strategic Plan Framework

#### Vision

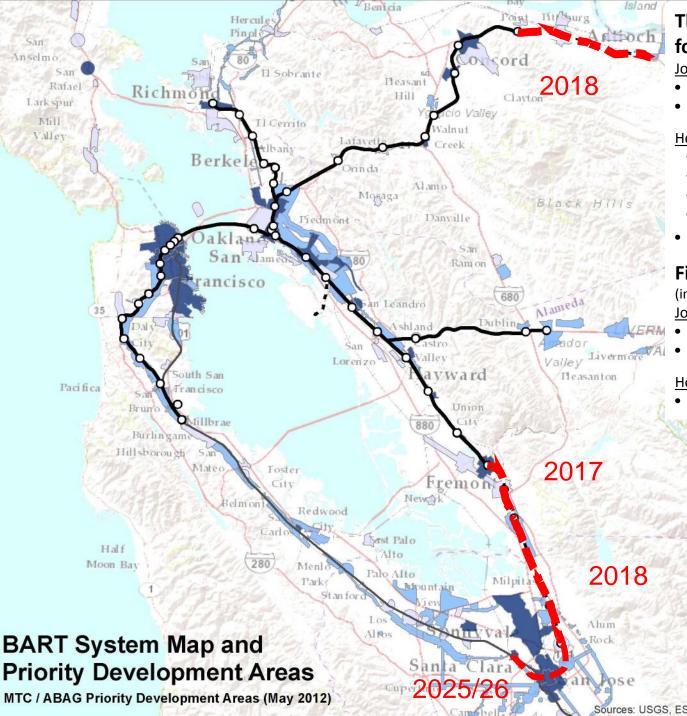
BART supports a sustainable and prosperous Bay Area by connecting communities with seamless mobility.

Mission Provide safe, reliable, clean, quality transit service for riders.





Adopted October 22, 2015



#### Three BART District Counties for 2040

Job Growth

• 565,000

• 50% of growth near BART

#### Household Growth

<ul> <li>San Francisco</li> </ul>	100,000
<ul> <li>Alameda</li> </ul>	160,000
<ul> <li><u>Contra Costa</u></li> </ul>	90,000
<ul> <li>Total</li> </ul>	350,000

• Over 40% of growth near BART

#### **Five Counties**

(includes San Mateo and Santa Clara) Job Growth

- ~ 1,000,000
- nearly 40% near BART

#### Household Growth

• 625,000, over 30% near BART

Legend

O BART Stations

#### BART System

- Current BART System
- Extension Under Construction
- Caltrain Line

#### **Priority Development Areas**

7

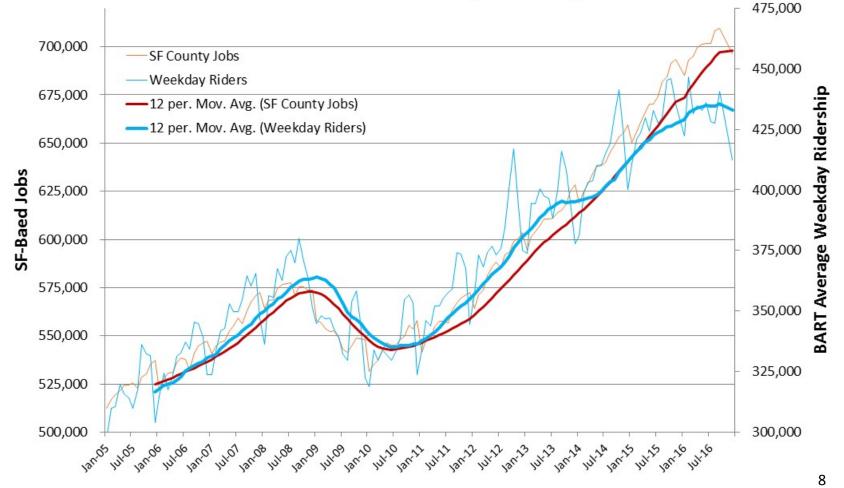
- High Intensity
- Medium Intensity
- Moderate Intensity

Sources: USGS, ESRI, TANA, AND, Sources: Esri, DeLorme, USGS, NPS

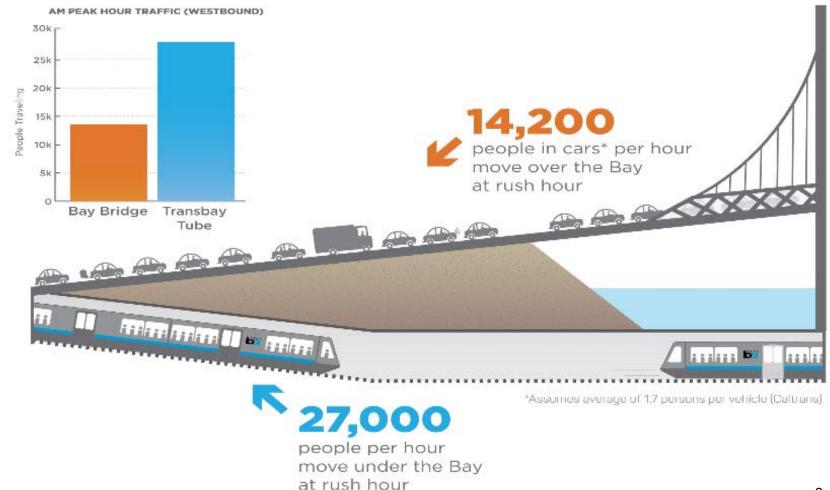


**BART Ridership vs SF County Jobs by Location** 









### Better BART, Better Market Street 2/3rds of BART trips begin or end on Market Street

#### Weekday Ridership (FY10 – FY16)

- Growth:
- Growth:
- June 2015

~100,000 433,000

29%

#### Weekday Trips by Sub-Area

THE STATE

- 52%: Transbay
- 27%: intra-West Bay

era ma han an a s

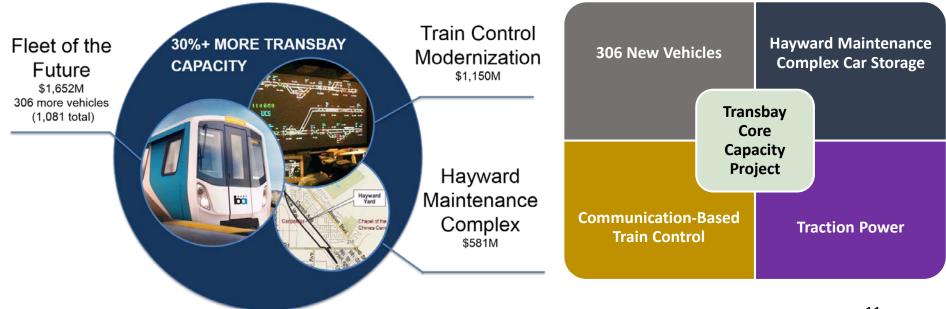
• 21%: intra-East Bay



 Project Objective: To increase Transbay capacity from 24 trains to up to 30 trains per hour in each direction

#### Supply Response – Big 3 Capital Projects

#### **Project Elements**



### **BART is Not a Young System Anymore** Station Agent Class of 1972



# **Investment Summary**

			Benefits		
	\$ Millions	% of Total Bond	Safety	Reliability	Crowding + Traffic Relief
REPAIR AND REPLACE CRITICAL SAFETY INFRASTRUCTURE	\$3,165	90%	$\checkmark$	~	~
Renew track	\$625	18%	$\checkmark$	$\checkmark$	
Renew power infrastructure	\$1,225	35%	<	~	
Repair tunnels and structures	\$570	16%	$\checkmark$	$\checkmark$	
Renew mechanical infrastructure	\$135	4%	$\checkmark$	~	
Replace train control and other major system infrastructure to increase peak period capacity	\$400	12%	<	~	~
Renew stations	\$210	6%	$\checkmark$	$\checkmark$	$\checkmark$
RELIEVE CROWDING, REDUCE TRAFFIC CONGESTION, AND EXPAND OPPORTUNITIES TO SAFELY ACCESS STATIONS	\$335	10%	~	~	~
Expand opportunities to safely access stations	\$135	4%	$\checkmark$	~	~
Design and engineer future projects to relieve crowding, increase system redundancy, and reduce traffic congestion	\$200	6%		$\checkmark$	~
TOTAL	\$3,500	100%			

# **Near Term Project Delivery Criteria**

- Urgent Fix-it-First Needs
- Critical Path Activities on Major Core Capacity Improvement Projects
- Shovel Ready Projects
- Early Engineering on Long Lead Projects

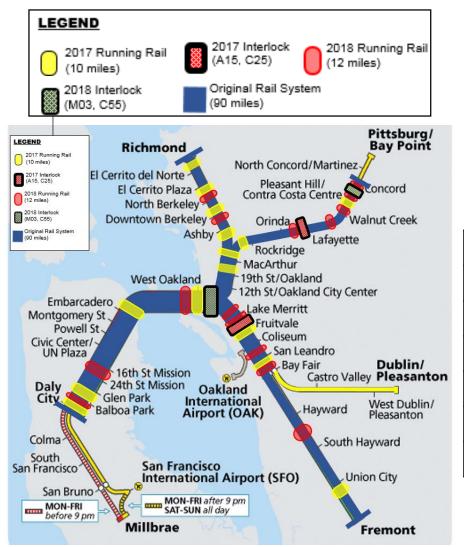
# Bond Project Selection Criteria

- Started with our Risk Register using industry Asset Management principles
- Created a Capital Needs Inventory (CNI)
- Evaluated risks in CNI relative to:
  - Safety, likelihood, impact, reliability, efficiency, regulation compliance, human interface, sustainability, and time criticality
- Identified Scope/Schedule/Estimate



# Renew Track – \$625 Million

# Renew Track



#### Scope:

- Replace 90 miles of track
- New Wheel Profile Interface
- Rebuild Inter-lockings

#### Total Program: \$625 M

Project	Thru FY18	FY19	Total
Rail Replacement	\$35.9	\$28.3	\$64.2
New Wheel Interface	\$1.5	\$2.5	\$4.0
M03 Interlocking	\$4.5	\$3.0	\$7.5
C55 Interlocking	\$2.0	\$9.5	\$11.5
C35 Interlocking	\$2.0	\$4.0	\$6.0
Total	\$45.9	\$47.3	\$93.2



# Renew Power – \$1.225 Billion

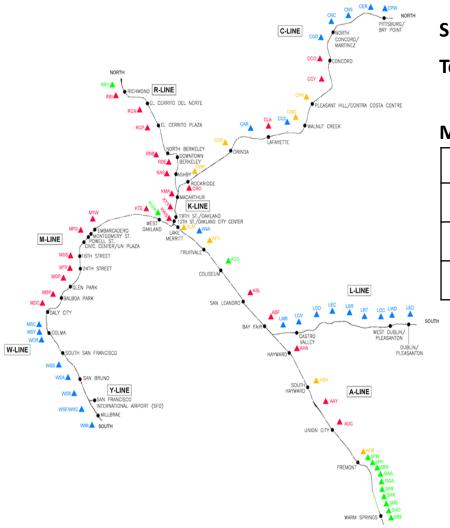




Scope: Replace 34.5 kV Cable system-wide Total Program: \$488 M

Project	Thru FY18	FY19	Total
M-Line Cable Replacement	\$29.7	\$47.9	\$77.6
A-Line Cable Replacement	\$4.5	\$0.0	\$4.5
C-Line Cable Replacement	\$5.5	\$3.0	\$8.5
R-Line Cable Replacement	\$1.6	\$7.0	\$8.6
Total	\$41.3	\$57.9	\$99.1

### **Renew Power** – Substation Replacement



Scope: Replacement 28 Substations

Total Program: \$301 M

#### Measure RR Cashflow Forecast (\$ Millions)

Project	Thru FY18	FY19	Total
ASL/KTE Substations	\$7.1	\$10.4	\$17.5
Design/Engineering	\$11.6	\$6.3	\$16.9
Total	\$18.7	\$16.7	\$35.4

LEGEND

SUBSTATION TO BE REPLACED WITH GO BOND

- SUBSTATION REPLACED IF SUFFICIENT FUNDING
- SUBSTATION REPLACED AFTER 10 YEARS
- NEW SUBSTATION





#### Scope:

2 New added capacity substations

- Civic Center
- Montgomery

#### Total Program: \$41.90 M

Project	Thru FY18	FY19	Total
Civic Center-Design	\$3.5	\$2.9	\$6.4
MontDesign	\$3.5	\$2.9	\$6.4
Total	\$7.0	\$7.0	\$12.8

### **Barry Renew Power** – Electrical Systems



#### Scope:

- TBT Generator & switchgear replacement
- Uninterruptible Power Supply (UPS) Train Control
- Tunnel Lighting
- Station Fire Alarm replacement
- Station Emergency Lighting

#### Total Program: \$225 M

Project	Thru FY18	FY19	Total
TBT Generator	\$6.5	\$12.5	\$19.0
UPS Train Control Room	\$4.0	\$5.5	\$9.5
Tunnel Lighting	\$3.0	\$13.0	\$16.0
Station Lighting	\$4.0	\$5.0	\$9.0
Design/Engineering	\$1.6	0.0	\$1.6
Total	\$19.1	\$36.0	\$55.1



# Renew Mechanical Infrastructure – \$135 Million

# Renew Mechanical Infrastructure



#### Scope:

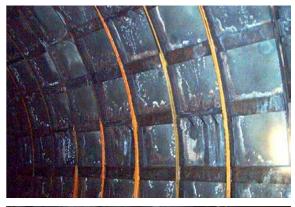
- Storm Water Treatment
- Fire services at Yards
- Replace HVAC in Facilities
- Fire suppression at Lake Merritt Admin building
- Replace Lake Merritt Computer Room Cooling Unit Total Program: \$135 M

Thru FY18	FY19	Total
\$0.2	\$0.0	\$0.2
\$3.5	\$3.5	\$7.0
\$0.5	\$1.0	\$1.5
\$0.4	\$0.0	\$0.4
\$0.5	\$1.0	\$1.5
\$1.9	\$0.0	\$1.9
\$7.0	\$5.5	\$12.5
	\$0.2 \$3.5 \$0.5 \$0.4 \$0.5 \$1.9	\$0.2       \$0.0         \$3.5       \$3.5         \$0.5       \$1.0         \$0.5       \$1.0         \$0.5       \$1.0         \$0.5       \$1.0         \$0.5       \$1.0         \$0.5       \$1.0         \$0.5       \$1.0



## Repair Tunnels & Structures – \$570 Million

### Repair Tunnels & Structures – Structures



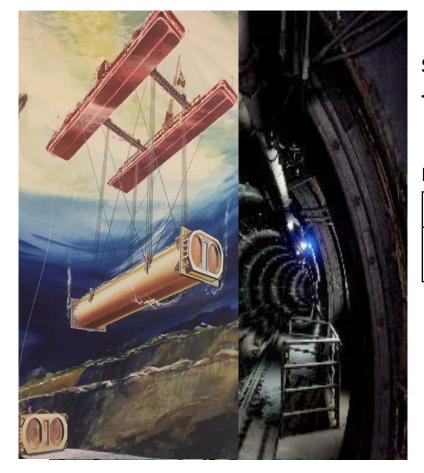


#### Scope:

- Replace TBT Cross Passage Doors
- Waterproof Tunnels & Structures
- Fall Protection
- Wayside Regulatory Signage
- Platform Edge Structure Renewal
   Total Program: \$451.2 M

Project	Thru FY18	FY19	Total
TBT Cross Passage	\$7.6	\$1.5	\$9.1
Waterproof Tunnels & Structures	\$2.5	\$2.0	\$4.5
Fall Protection	\$1.6	\$2.7	\$4.3
Wayside Signage	\$0.5	\$0.7	\$1.2
Platform Edges	\$0.3	\$0.3	\$0.6
Total	\$12.5	\$7.2	19.7

### **Repair Tunnels & Structures** – Transbay Tube (TBT) Retrofit Options



**Scope:** Full retrofit of 7 additional TBT sections **Total Program:** \$53.75 M

Project	Thru FY18	FY19	Total
TBT Retrofit Options	\$1.6	\$8.7	\$10.3

### **Repair Tunnels & Structures** – Upper A-Line Seismic Operability Upgrade

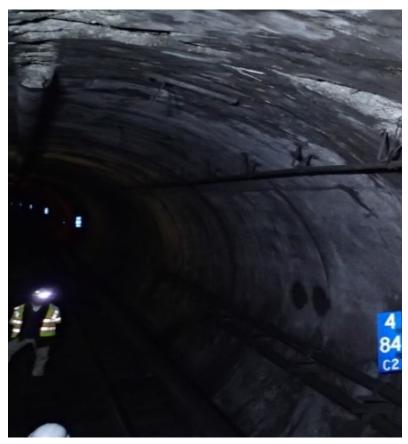


**Scope:** Preliminary engineering of the Upper A-Line retrofit (from Lake Merritt to Coliseum)

Total Program: \$5 M

Project	Thru FY18	FY19	Total
Upper A-Line Retrofit PE	\$2.0	\$2.0	\$4.0

### **Repair Tunnels & Structures** – Caldecott BART Tunnel (CBT) Creep



#### Scope:

- Excavate interior lining of CBT
- Realign the trackway

#### Total Program: \$60 M

Project	Thru FY18	FY19	Total
CBT Creep Repair	\$3.0	\$7.8	\$10.8



# Replace Train Control and Other Infrastructure to Increase Peak Capacity – \$400 Million

# Train Control & Other Major System

Train Control Modernization Program (TCMP)



Up to 25% Increase in Train Capacity

Fixed-Block Signaling System: Existing Train Control Technology



Communications-Based Train Control: Needed to Increase Capacity and Assure Reliability



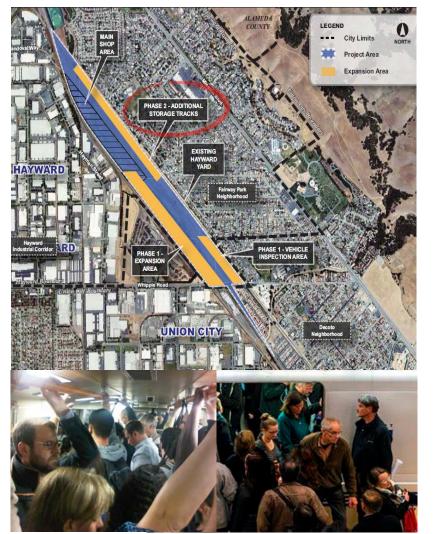
... along with BART Fleet of the Future and Enhanced Traction Power

**Scope:** Upgrade Legacy train control system to Communication-Based Train Control (CBTC)

**Total Program:** \$396M (BART share of \$1.15B Total project)

Project	Thru FY18	FY19	Total
ТСМР	\$0.0	\$2.0	\$2.0

### Train Control & Other Major System Infrastructure – New Starts (Core Capacity)



#### Scope:

- Design/Engineering for expanded yard storage for increased fleet (HMC – Phase II)
- Design/Engineering for new traction power (TP) substation at Richmond Yard, Pleasant Hill (Minert Ave.), and Oakland 34th St.

#### Total Program: \$6.2 M

Project	Thru FY18	FY19	Total
HMC Ph II Design	\$4.6	\$1.0	\$5.6
Richmond Traction Power Design	\$0.2	\$0.0	\$0.2
PH Traction Power Design	\$0.2	\$0.0	\$0.2
Oakland Traction Power Design	\$0.2	\$0.0	\$0.2
Total	\$5.2	\$1.0	\$6.2



# Renew Stations – \$210 Million

### **Renew Stations** – Escalator Renovation and Canopy Program



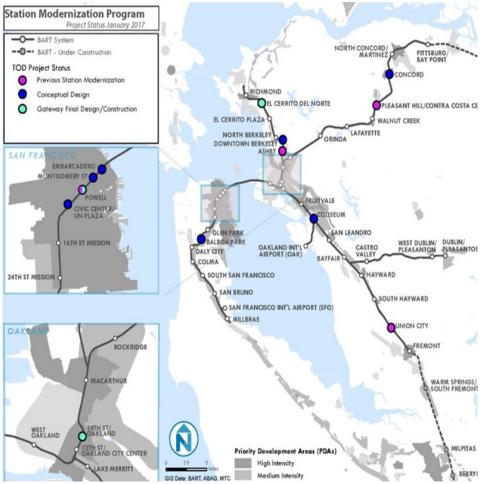
#### Scope:

- Replace platform and street escalators
- Design and construct escalator/stair canopies

Total Program: \$190 M

Project	Thru FY18	FY19	Total
Escalator/Canopy	\$3.3	\$12.7	\$15.0

### **Renew Stations** – Station Modernization



#### Scope:

- 4 station modernization conceptual plans
- 2 station modernization detailed design /construction

Total Program: \$20 M

Project	Thru FY18	FY19	Total
Conceptual Plans	\$1.1	\$0.4	\$1.5
Design/ Construction	\$0.2	\$0.5	\$0.7
Total	\$1.3	\$0.9	\$2.2



## Station Access – \$135 Million



## **BART Station Access Policy Goals**

Measure RR: Expand Opportunities to Safely Access Stations



### A. Safer, Healthier,

**Greener.** Advance the region's safety, public health, and greenhouse gas (GHG) and pollution-reduction goals.



**B. More Riders.** Invest in station access to connect more riders cost effectively, especially where and when BART has available capacity.



### a better neighbor, and strive for an excellent customer experience, including

**D. Better Experience.** *Be* 

on the first and last mile of the trip to and from BART stations.

## E. Equitable

Services. Invest in access

choices for all riders, particularly those with the fewest choices.



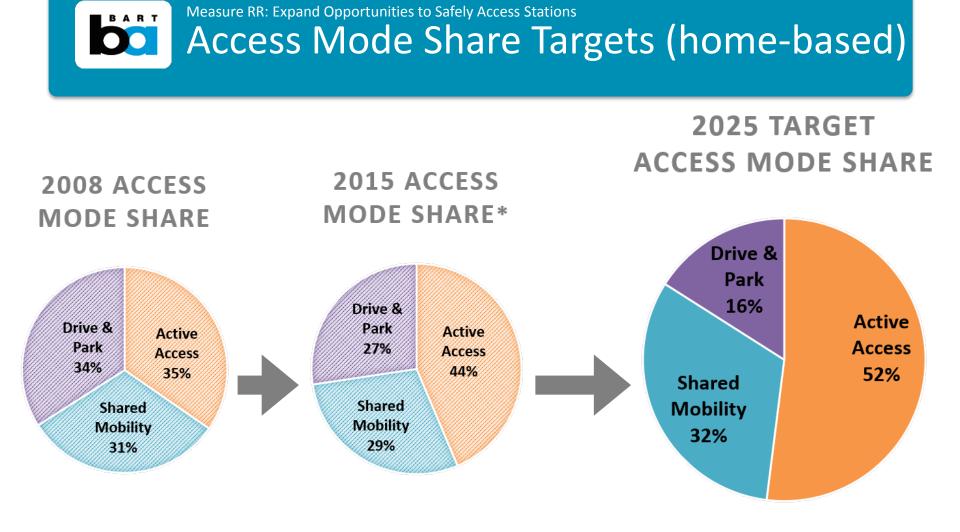
**C. More Productive and Efficient.** *Manage access investments, programs, and current assets to achieve goals at the least cost.* 



# F. Innovation and Partnerships. Be an

innovation leader, and establish durable partnerships with municipalities, access providers, and technology companies.

BART Board adopted June 9, 2016



Active Access: Walk, Bike

Shared Mobility: Transit, Shuttle, TNC, Drop-Off, Carpool

Drive & Park: Drive Alone

\*Preliminary 2015 Station Profile Survey Data

### Active Access

- Safe Routes to BART Program\*
- Bike stations
- Bike Channels
- Regional connections
- Station Area Access:
  - Plazas, pathways, sidewalks, lighting
  - Intersection improvements
  - Placemaking / Art
- Accessible faregates
- Wayfinding

### Shared Mobility

- Comprehensive Redesign at priority stations (coordinated with TOD)
- Upgrade Transit Connections (benches, lighting, ADA improvements)

Seniors & People with Disabilities

- Fire Alarm Strobe Lights
- Hearing Loop
- Beacons
- Braille
- Handrails
- Elevator controls/ improvements

\*Confirm eligible for bond funding

### Drive & Park

- Wayfinding
- Improve safety/security and enforcement
- Strategic Parking Expansion

39

### **Project Examples by Mode**

### Measure RR: Expand Opportunities to Safely Access Stations Project Delivery Approach

### **Advance & Construct Pipeline Projects**

- Station Area Improvements: MacArthur Station Access: Plaza & 40th Street Underpass Lighting, Concord Plaza, Coliseum & Fremont connections, WSX Ped Bridge, LM Plaza
- **Bike stations:** LM, D/P, Fremont, SL, 19th St, WO, NB, Rockridge, Ashby, El Cerrito del Norte **Regional connections:** Ohlone Greenway at El Cerrito del Norte, Iron Horse Trail at D/P
- Real-time **Parking** displays, P/BP **Drop-Off**, El Cerrito del Norte **Intermodal**

Planning Efforts Underway	Ongoing Planning & Project Identification
Multimodal Design Guidelines	
N. Concord to Antioch BART Access Study	Project Selection &
<ul> <li>Pedestrian and Bicycle Network Gap Closure Study</li> </ul>	Implementation
Curb Use Study	Interdepartmental Staff Apply Board Adopted
Bike Parking Capital Plan	Policy to Prioritize Projects Every 6 Months
Accessibility Improvement Program	<ul> <li>Project Selection based on policy-based criteria</li> </ul>

### Expand Opportunities to Safely Access Stations



#### Scope:

- Achieve Station Access Policy Goals & Targets
- Improve Active Transportation and enhance Access for Seniors & People with Disabilities
- Renew Transit Transfer Facilities
- Improve Parking Availability

#### Total Program: \$135 M

• Funds will leverage other sources

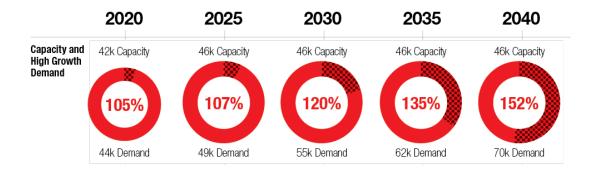
#### Measure RR Cashflow Forecast (\$ Millions)

Project	Thru FY18	FY19	Total
Active Access	\$8.0	\$13.6	\$21.6
Shared Mobility	\$2.2	\$3.3	\$5.5
Drive & Park	\$2.3	\$3.1	\$5.4
Seniors & Disabled	\$1.5	\$3.0	\$4.5
Total	\$14.0	\$23.0	\$37.0



## Relieve Crowding/System Redundancy – \$200 Million

### Relieve Crowding/System Redundancy – Transbay Crossing Phase 2



#### Scope:

- Partner with mainline rail agencies
- Examine governance and funding
- Conduct regional market analysis
- Develop service plan for rail networks
- Develop operations plan and detailed transportation model
- Initiate conceptual engineering

#### Initial Phase: \$10 M

#### Measure RR Cashflow Forecast (\$ Millions)

Project	Thru FY18	FY19	Total
Transbay Crossing	\$2.9	4.0	\$6.9

### Relieve Crowding/System Redundancy – BART Metro/Core Capacity



**Scope:** Design / construction of BART Metro infrastructure improvements **Initial Phase:** \$21 M

#### Measure RR Cashflow Forecast (\$ Millions)

Project	Thru FY18	FY19	Total
L-Line / I-580 Barrier	\$0.0	\$2.0	\$2.0
Embarcadero Elevator	\$1.5	\$4.3	\$5.8
Platform Screen Door Pilot	\$1.5	\$1.5	\$3.0
Lafayette Pocket Track Replace	\$0.7	\$1.3	\$2.0
Millbrae Tail Track	\$0.5	\$0.3	\$0.8
Dublin Tail Track	\$1.5	\$0.3	\$0.8
FTA Core Capacity Program Mgmt	\$1.5	\$1.2	\$2.7
Total (rounded)	\$6.2	\$11.0	\$17.1



## Cashflow Drawdown Summary thru FY19

## Measure RR Cashflow by Program Category (\$ Millions)

Program	Actual Expended – thru mid June FY17	Forecast Thru FY18	Forecast FY19	Forecast Total
Renew Track	\$11.3	\$45.9	\$47.3	\$93.2
Renew Power Infrastructure	\$1.3	\$85.2	\$117.2	\$202.4
Repair Tunnels & Structures	\$0.3	\$19.1	\$25.6	\$44.7
Renew Mechanical	\$0.1	\$7.0	\$5.5	\$12.5
Replace Train Control/Increase Capacity	\$0.1	\$5.2	\$3.0	\$8.2
Renew Stations	\$1.4	\$4.6	\$13.6	\$18.2
Expand Safe Access to Stations		\$14.0	\$23.0	\$37.0
Design/Engineer to Relieve Crowding		\$9.1	\$14.9	\$24.0
Total	\$14.5	\$190.1	\$250.1	\$440.2



### Presentation to the Measure RR Oversight Committee 2017 Series A Measure RR GO Bonds

#### NEW ISSUE - BOOK ENTRY ONLY

RATINGS: Moody's: Aaa Standard & Poor's: AAA See "Ratings" herein.

In the option of Orrick, Herrington & Sattliff LLP, Bond Causad to the District, based upon an analysis of estiling hear, regulation, relingtion, relingtion of court focus and assuming anomy other matters, the discrete graviness and and complicate with certain to coreanist, interest on the Tax-Everapt Bonds is excluded from press ticome for forband linear tax parasons used Science 100 (4) the Internal Research Code (1956). In the Upthere option of Bond Causad, and complicate with certain to coreanist, interest on the Tax-Everapt Bonds (1967) and the Code (1956). In the Bond Causad, alternative minimum taxes, disheaph Bond Causal during the tax the Internet is included in adjusted exerust corring when coinclusting corporate districution terminum statuets located. Bond Causad, the Gausad (1967) and the Internet the 2017 Bonds is accessful from State of California personal iscone taxes. Band Causad further observes that interest an the 70 arX Bonds is not excluded from grass inseme for fracted intenses tax prepares number Scienci (10) of the Code. Band Causad, carpareness no opticion regarding any other tax compareness tailed to the oone-take of alignetistics of the advect bands, accessior are cerely of lawards and the 2017 Bonds. See 77 AdAINTESS Heven Sciences.



(ELECTION OF 2016), 2017 SERIES A-1 (GREEN BONDS)



(ELECTION OF 2016), 2017 SERIES A 2 (FEDERAL 2017 SERIES A 2 (FEDERAL 2017 SERIES E (GREEN BONDS) TAXABLE) (GREEN BONDS) Due: Aggust 1, as shown on inside cover Transit District General Obligation Bords (Zbection of 2016), 2017 Series A 1 (Green

The Sam Paneticson Bay Area Baglel Transit District General (Osligation Borne) (20-cition of 2016), 2017 Series A.1 (Green Doub) (1996) (2017). Books) and 2017 Series A.2 (Green David) (2017). Seri

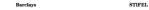
Principal on the 2017 Bonds is payable in the amounts and on the dates set forth on the inside cover. Interest on the 2017 Bonds, which is payable on February 1 and August 10 each year, commencing, August 1, 2017, and the principal of the 2017 Bonds is payable by U.S. Bank National Austrication, as attraster, to Cock & Co., and action hitterest and principal payments are to be disbursed to the beneficial owness of the 2017 Bonds through their respective DFU Direct Participants.

The 2017 Bonds are general obligations of the San Francisco Bay Area Bapid Transit District (the "District"), payable from and secured solehy by air outernations to be levied upon all property subject to taxation by the District, without limitation as to nate or anomet copies of security approach property which is taked as a limited rate payle wild in Alandae and Cortar Costa Counties and the City and County of San Prancisco, as more fully described herein. No other revenues of the District are pilotged to the payment of the 2017 Bonds.

The 2017 Bonds are subject to optional and mandatory redemption prior to maturity as described herein.

This cover page contains certain information for reference only. It is not a summary of this issue. Investors must read the entire Official Statement to obtain information essential to the making of an informed investment decision

The 2017 Bonds are effered when, as and if issued by the District and received by the Underwriters, subject to the approximation of Diricit, Hernington & Statiffitte J. Jass Francisco, Califfittin, Band Cansent of the District: Creting lange matters with be passed upon for the Underwriters by their course). Curis Bartling P.C., and for the District Creting lange matters with Barrows. Bas, and by Orrick, Hernington & Statifitti L.D. Discissors Concernation the District. The 2017 Bonds in book-entry only form are expected to be delivered through the fallings of LTC once counsel on the District. The 2017 Bonds in book-entry only form are expected to be delivered through the fallings of LTC once counsel on the District.



Alamo Capital Backstrom McCarley Berry & Co., LLC BofA Merrill Lynch Blaylock Van, LLC Citigroup Fidelity Capital Markets Goldman Sachs & Co. LLC

J.P. Morgan Morgan Stanley Raymond James Siebert Cisneros Shank & Co., L.L.C. Date: May 10, 2017





## Measure RR Bond Sale Timeline

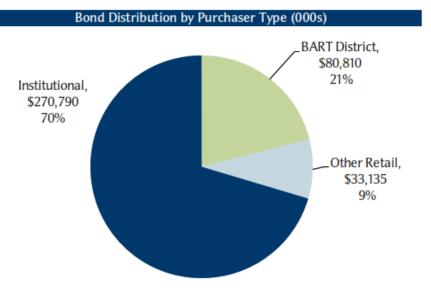
- November 8, 2016 Measure RR Passes
- February 9, 2017 Underwriting Pool RFP Released
- March 23, 2017 Board Approves Underwriting Pool
- April 18, 2017 Presentation to Rating Agencies
- May 3, 2017 Receive Ratings/Posted POS
- May 9-10, 2017 Bond Pricing
- June 1, 2017
- Closing



- Authorized by the Election of 2016 (Measure RR), the 2017 Series A-1 and A-2 GO Bonds provided \$300 million in proceeds for eligible projects from the District's System Renewal Plan.
  - 1<sup>st</sup> Measure RR GO Bonds Issued
  - 1<sup>st</sup> BART Green Bonds Issuance
- The true interest cost of the 2017 Series A Bonds was 3.57%; the Measure RR election assumptions used 5.00% true interest cost
- Aaa (Moody's)/AAA (S&P) Ratings

## Measures AA & RR GO Bonds Pricing

- District engaged in a comprehensive marketing plan
  - DSS & Station Signs
  - Social Media, BART Website
  - Investor Calls
- May 9<sup>th</sup> Retail Order Period
  - 458 orders totaling \$378 million.
  - 64% of the retail orders came from investors in the District
- May 10<sup>th</sup> Institutional Order Period
  - 100 orders totaling \$1.3 billion resulting in 4.7x oversubscription in aggregate.



## WE'RE REBUILDING

#### THANK YOU BAY AREA!

On November 8, 2016, nearly 70% of District voters said yes to Measure RR, approving \$3.5 billion in new bonds dedicated to building a better BART. These funds will cover part of our plan to rebuild—and will help provide residents with a safer, more reliable rail system able to carry more people to more places than ever before. For that, we cannot express our gratitude often enough.



SEASE COL

### 00

#### **REBUILDING BEGINS NOW**

Local engineers, planners, architects, and railway maintenance crews have done an outstanding job getting the most out of our 45-year-old system, safely stretching the life of trains, switches, circuitry, and stations. As we enter this next era together, projects years in the making will ramp up and head toward the finish line.

### REBUILDING POWER SUBSTATIONS

It's easy to see how Measure RR is part of a larger puzzle: it complements the work we've already been doing to solve the Bay Area's swelling traffic problem. For example, new power substations are in the planning phase, with construction set to begin in 2019. They'll be built just in time to serve both seasoned and new customers in places like Warm Springs, Milpitas, and Berryessa—stations already open or set to open soon.



#### **REINFORCING TUNNELS**

New trains will soon be serving passengers as well—the first Fleet of the Future cars have arrived, and will complete testing in the next few months. Once delivered, they'll be running through newly reinforced and waterproofed tunnels, tunnels able to withstand the strongest of Bay Area earthquakes.



### BETTER BART. BETTER BAY AREA. **MAJOR MILESTONES**



#### Station Improvements Milestone

Design phase wraps up on canopy enclosures for San Francisco station entrances, protecting escalators from the elements.



#### **Leaky Tunnel Repair Begins**

Leaky tunnels in downtown SF are being fixed to prevent breaks in the rail.



#### **BART to Silicon Valley** Phase 1 Complete

BART now extends an extra 10 miles south of Fremont, ending at Berryessa Station just northeast of San Jose. Warm Springs, Milpitas, and Berryessa stations are open and serving daily passengers.



#### **Berkeley Hills Tunnel Repair Begins**

Misalignment starts getting fixed in the Berkeley Hills tunnel, a result of the Hayward fault creeping north across the East Bay.





#### **BART to Silicon Valley** Phase II Breaks Ground

With BART extended to Berryessa, construction begins on completing the full 16-mile extension that will tunnel under San Jose and end in Santa Clara.



After four years of careful engineering and design, the train control upgrade project begins. Once complete, over 1,000 trains can run systemwide, with added capacity through the Transbay Tube.



#### Fleet of the Future Arrives

The first 25 new train cars arrive and are carrying passengers. They're quieter, cleaner, easier to board, and easier to navigate.



#### **BART to Antioch Complete**

Two new stations, eight new trains, and 10 miles of new track are open.



#### **Track Replacement** Milestone

Since the beginning of 2017, we've replaced 22 miles of track-equal to the distance between Sausalito and SFO.



#### El Cerrito del Norte **Modernization Complete**

This 44-year-old station looks better than ever with new lighting, restrooms and amenities.



#### Fleet of the Future Delivery Milestone

The first half of the production order of our planned 775 new train cars is delivered.







#### Transbay Tube Earthquake **Retrofit Complete**

One of the safest places in the Bay Area to be during an earthquake is in the Tranbay Tube, now capable of surviving a 1,000-year quake thanks to Measure RR and previous bonds.



#### **Power Substations** Milestone

Newly built substations are quietly powering the commute of daily riders. Our 1960s-era power transmission infrastructure is on its way out.



#### Fleet of the Future Delivery Complete

All 775 new train cars have been delivered, and are carrying passengers. Be on the lookout for an additional 306-car delivery. Having 1,081 cars is a 49% increase in BART seats from 2017.



## STAYING ACCOUNTABLE

#### **BOND OVERSIGHT COMMITTEE**

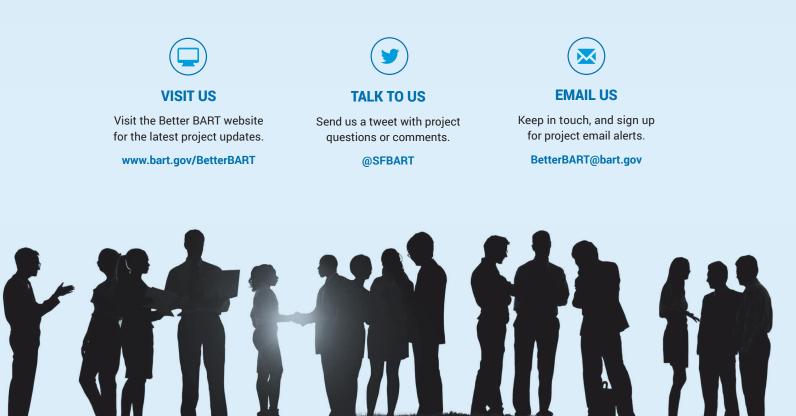
To ensure practical and transparent spending of Measure RR funds, an Independent Oversight Committee has been formed. Comprised of Bay Area residents with expertise in engineering, auditing, public finance, and construction project management, the RR-OC (Measure RR Oversight Committee) will also include representatives from the League of Women Voters.

#### Duties and responsibilities of the committee will include:

- Auditing bond expenditures
- · Confirming work is completed in a timely and cost effective manner
- Communicating Committee findings and recommendations to the public and to BART
- Publishing publicly available annual reports

#### **THE RAIL**

Curious about the latest Measure RR projects, or wondering how your investment is paying off? Never miss an update by signing up for our email newsletter —The Rail. Sign up with your email at a community meeting or contact thuckab@bart.gov to get on the distribution list.



# BART System Renewal Program Plan | 2016



**BUILDING A BETTER BART** 





## CONTENTS

Letter From the General Manager and Board of Directors	1	
Introduction	4	
Program Summary	6	
Program Development	8	
Program Investments	10	
Repair and replace critical safety infrastructure	10	
Relieve crowding, reduce traffic congestion, and expand opportunities to safely access stations	18	
Benefits of the Plan	20	
Organizational Structure	24	
Implementing Guidelines	26	





#### LETTER FROM THE GENERAL MANAGER

Dear Bay Area Residents,

BART has served the Bay Area for 44 years, delivering efficient transportation that supports the region's economy, reduces traffic congestion, and protects the environment. BART's around-the-clock preventative maintenance practices have sustained the system's original infrastructure far longer than expected, but even well-maintained infrastructure eventually reaches the end of its useful life and must be renewed. For the BART system, the time has finally come for a major overhaul.

In consultation with stakeholders from across the region in more than 200 meetings, BART has developed a program of investments that will take a major step towards renewing the BART system. This detailed plan will repair and upgrade critical infrastructure, including tracks, power systems, tunnels, and mechanical systems. It will add capacity to the core of the system in order to continue to support the region's growing economy and reduce traffic congestion. Finally, it will improve safety and access to the BART system, renewing stations, improving accessibility of stations for seniors and people with disabilities, and adding new station access opportunities.

This plan benefits both those who ride the BART system and those who travel on other modes. Through these investments, the plan will support the region in the following ways:

> • Improve safety: BART has no higher responsibility than to keep its riders safe. This program will help to preserve BART's safety record, enhance earthquake preparedness, and maintain the region's confidence in the system.



**Improve reliability:** Bay Area travelers depend on reliable BART service to connect them to work, school, airports, sporting events, the arts, shopping, family, and friends. Renewing the system's critical infrastructure will keep BART trains in service and running on time. Modeling suggests the program plan will result in 40% fewer delays caused by mechanical issues than occur today, a savings of 250 hours of delay each year.



Relieve crowding and reduce Bay Area traffic

**congestion:** Over BART's 44-year history, system ridership has grown with the regional economy, relieving pressure on the region's crowded highways and supporting the emergence of thriving regional employment centers. Today, however, BART ridership is at or above the system's maximum capacity in its busiest segments. Investments to increase BART's capacity will relieve crowding and allow BART to take more cars off our crowded roads in continued support of the region's growth.

The plan includes strict accountability measures to ensure that funds are spent only on approved projects. It requires an independent oversight committee made up of people who live in the BART district, and annual compliance reports distributed to the public that detail costs and how specific performance measures are met. This Plan will help to Build a Better BART for the Bay Area's Future.

Sincerely,

Grace Crunican, General Manager / Cosigned: BART Board Members



## Introduction

## BART is Critical to the Bay Area

Since its opening in 1972, BART has become essential to the mobility, economy and livability of the Bay Area, for riders and nonriders alike. A functioning BART system is essential to the health of our region connecting workers and businesses, and relieving regional traffic congestion. BART provides access to many of the region's most important destinations for work, school, and recreation and accommodates people of all income levels as well as youth, seniors, and people with disabilities. By reducing the need to drive, BART reduces emissions and air pollution, supporting a healthier environment.

BART currently carries 440,000 passengers on a typical weekday. During peak periods, BART carries nearly double the number of people from the East Bay to San Francisco than are carried on the Bay Bridge. On the yellow Pittsburg Bay Point line, BART carries nearly as many peak hour riders as are carried through the Caldecott tunnel. BART is an essential part of our regional infrastructure, and demand for BART service is growing. Forecasts suggest that demand for BART will increase as the region grows, with 600,000 daily riders projected to use BART by 2040.

### BART Faces Major Challenges

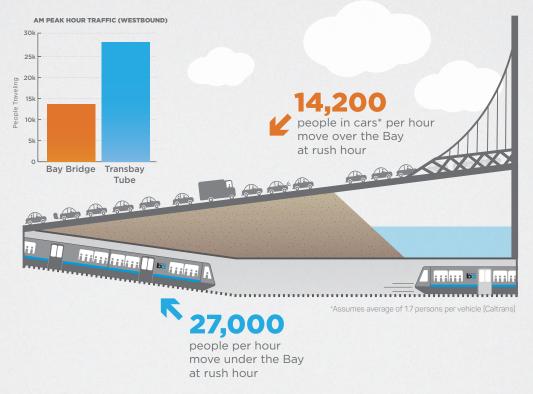
After 44 years of service to the region, BART faces major challenges.

- As the economy has grown and more people have chosen to ride BART, the system has grown increasingly crowded during peak commute hours. To meet the demand, BART must invest to provide more service in the highest-demand times and places.
- At the same time, important parts of the infrastructure that make up the BART system were installed in the early 1970's and require replacement or major overhauls.
- Finally, BART must consider its stations and how an influx of additional riders will access BART stations.

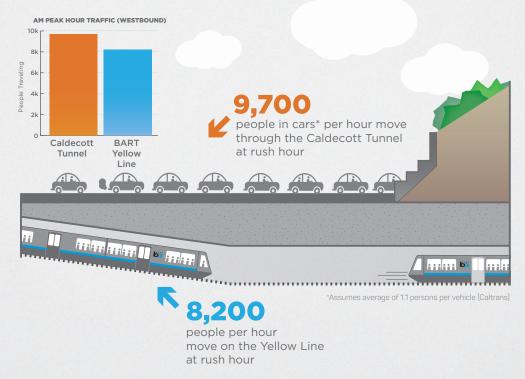
Without action to address BART's aging infrastructure and crowded conditions, BART's ability to perform its important role in the region will suffer: delays will increase, crowding will grow more acute, and the risk of unsafe conditions will rise. These consequences would affect not only BART riders, but everyone who lives in the area served by BART. Without a reliable BART system, the region would face worsening traffic congestion which would also reduce economic competitiveness.

Funding from currently available sources is not sufficient to meet these growing needs. BART must seek new funding sources to continue to serve its important role in the region. This program plan is designed to address these challenges.

### BART's Transbay Tube Riders vs. Bay Bridge Drivers



### **BART's Yellow Line Riders vs.** Caldecott Tunnel Drivers



## **Program Summary**

The 2016 BART System Renewal Program (referred to throughout this document as the Program) responds to the San Francisco Bay Area's transportation needs by investing in the renewal of the BART system. In consultation with stakeholders from across the region in more than 200 meetings, BART has developed a program of investments that will:



#### Repair and replace critical safety

**infrastructure:** BART will renew the basic infrastructure that comprises the core of the BART system, including tracks, power infrastructure, tunnels, and mechanical infrastructure. BART will also perform critical earthquake safety upgrades to the Berkeley Hills Tunnel. After 44 years of service, this infrastructure requires a major overhaul to allow BART to continue to meet performance expectations.

#### Relieve crowding and reduce traffic

**congestion:** BART will implement a package of projects that will allow it to meet soaring demand, continue to support the region's growing economy, and get more cars off the road. Projects include modernizing and replacing major portions of the aging train control system, upgrading power infrastructure that limit BART's ability to provide service, and expanding maintenance facilities to store and service a larger fleet of rail cars.



• Improve station access and safety: BART will invest in improving and modernizing stations by improving station safety and security, adding elevators, and overhauling escalators to ensure fast and convenient access to platforms. BART will also make investments to improve accessibility of stations for people with disabilities and add more station access opportunities via upgraded bus facilities, bicycle facilities, and parking.







#### **Summary of Investments**

			Benefits		
	\$ Millions	% of Total Bond	Safety	Reliability	Crowding + Traffic Relief
REPAIR AND REPLACE CRITICAL SAFETY INFRASTRUCTURE	\$3,165	90%	$\checkmark$	$\checkmark$	$\checkmark$
Renew track	\$625	18%		$\checkmark$	
Renew power infrastructure	\$1,225	35%	$\checkmark$	$\sim$	
Repair tunnels and structures	\$570	16%		$\checkmark$	
Renew mechanical infrastructure	\$135	4%	$\checkmark$	$\checkmark$	
Replace train control and other major system infrastructure to increase peak period capacity	\$400	12%	$\checkmark$	$\checkmark$	$\checkmark$
Renew stations	\$210	6%	$\checkmark$	$\checkmark$	$\checkmark$
RELIEVE CROWDING, REDUCE TRAFFIC CONGESTION, AND EXPAND OPPORTUNITIES TO SAFELY ACCESS STATIONS	\$335	10%	$\checkmark$	$\checkmark$	$\checkmark$
Expand opportunities to safely access stations	\$135	4%	$\checkmark$	$\checkmark$	$\checkmark$
Design and engineer future projects to relieve crowding, increase system redundancy, and reduce traffic congestion	\$200	6%		$\checkmark$	$\checkmark$
TOTAL	\$3,500	100%			

*Note on Governance:* Governance measures will include an independent oversight committee, spending restrictions, and annual audits. Funding cannot be taken away by the state.

*Note on Planned Expenditures:* Spending in the two major investment categories is fixed. As BART tailors investments to respond to system needs, actual spending within each of the two major categories may vary by up to 15% of the total. For example, if the tunnels and structures repair projects need less of this funding, up to 15% of the grand total for repairing and replacing critical safety infrastructure (15% of \$3.165B) can be shifted to another of the projects within that category such as renewing power infrastructure. However, BART cannot transfer that 15% savings to projects in the other major category to expand opportunities to safely access stations.

## **Program Development**

# BART is a responsible steward of bond funds

Bay Area voters last approved a bond measure for BART in 2004 to fund BART's Earthquake Safety Program. Funds from that bond have been invested

in maintaining the safety of the BART system, including its elevated structures, stations, maintenance facilities, and other buildings. The program has upgraded critical elements of BART infrastructure to current seismic design standards to support the safety of BART riders and BART employees. The Earthquake Safety Program has also achieved \$350 million in construction savings that BART was able to reinvest in the program to further strengthen the system.

To date, 58% of bond funds have been expended, and the program has completed 91% of planned station upgrades, 95% of planned elevated structure upgrades, and 100% of planned upgrades to parking garages, maintenance facilities, and other infrastructure. The majority of the remaining resources will be dedicated to planned work on the Transbay Tube, which is ongoing. Independent oversight has proceeded as planned. While the Earthquake Safety Program is achieving its objectives, additional earthquake safety investment is required to address seismic safety needs that have been identified since the program began.

An economic analysis of the 2004 Earthquake Safety Program shows that the program has not only improved safety but also helped to grow the region's economy. The investment of \$1.27 billion over 18 years (2004–2022) is projected to yield approximately \$2.2 billion in total economic activity and create nearly 13,000 direct and indirect jobs.





## Projects are carefully selected and prioritized

BART uses a Strategic Asset Management Program (AMP) to guide decisions about system reinvestment, minimize risk, and maintain financial stability. The AMP relies on detailed, ongoing data collection about each asset in the system, and follows international best practices to assess the likelihood of nearterm failure for each asset and understand the impact that such a failure would have on the BART system, its riders, and the region.

The AMP was used to select the investments included in the program. It will also be used on an ongoing basis to guide decisions about the appropriate timing of the projects funded by this program. The process will guide annual prioritization of investments.





### This plan was developed with broad public participation

This program plan was developed with extensive public involvement through the 'Better BART' Initiative. BART has held more than 200 meetings with diverse stakeholder groups throughout the Bay Area, including elected officials, businesses, labor groups, environmental organizations, users of all modes of transportation, senior and disability advocacy groups, community based organizations, social justice advocates, and many others. These meetings have been designed to educate the Bay Area public about BART's 44-vear-old system and the critical infrastructure investments needed to keep the system safe and reliable, and to get feedback on participants' needs and priorities. BART has distributed survey guestionnaires to all meeting attendees and received over 1.500 responses to date.

## **Program of Investments**

This program includes two categories of investment, which together are designed to keep BART safe and reliable. Each investment category is described in detail below, including the types of infrastructure projects it includes. Specific individual projects will be selected for funding through a detailed process of risk assessment as documented in BART's Strategic Asset Management Plan. More information on project selection and implementation process can be found in the Implementing Guidelines section of this document.



### **Repair and replace critical safety infrastructure**

BART was the first modern rapid transit system in the US: construction began in 1968 and the system has been in operation since 1972. To ensure responsible stewardship of public funds, BART staff has dedicated themselves to strategic maintenance, which has allowed some system infrastructure to last far longer than expected. However, even "best in the business" maintenance cannot keep obsolete infrastructure functioning forever.

The core of the program is a major investment to refurbish and replace BART's most critical infrastructure. There are thousands of infrastructure elements in the BART system, and most are largely invisible to passengers. However, all these elements are fundamental to BART's daily operation and the experience of passengers.

The other core element of the program is a series of investments that will relieve crowding and allow the BART system to accommodate regional growth, providing an alternative to increased driving on the region's already crowded roads. Over the last decade, daily Addresses Goals



**90%** of Program

**\$3,165** Million ridership on BART has increased 36%, closely tracking growth in regional employment. Growing ridership has already begun to place extraordinary demands on the BART system. Today, trains between Oakland and San Francisco exceed BART's standards for crowding during commute hours. Responding to this trend, BART has used all available resources to relieve crowding, including keeping 89% of its rail fleet in service at all times and adjusting schedules to provide service when and where it is needed most.

However, as the economy continues to expand, growth in demand for BART service will soon outpace the system's resources. To meet growing demand, BART must be able to provide more service at the highest-demand times and places.

#### RENEW TRACK Estimated at 18% of Program; \$625 M

BART tracks are worn down from 44 years of use and require major repairs. BART is already working aggressively to address issues with tracks and structures with currently available funding. For example, during summer 2015, BART undertook a major effort to renew the tracks and structures west of the West Oakland Station. However, to maintain system performance for the long term and reduce the risk of major failures, additional funds are needed to refurbish and replace track infrastructure. Examples of projects in this category include:

- **Replace 90 miles of rails:** BART crews will replace 90 miles of original rails that have been worn down from 44 years of use. They will replace hundreds of original rail ties supporting those rails.
- **Rebuild major interlockings:** Interlockings allow BART trains to cross from one set of tracks to another safely. This infrastructure must be rebuilt to allow BART to continue to operate safely and at normal speeds.



 Replace critical supporting track infrastructure: Critical infrastructure that supports BART's rails is more than 40 years old and must be replaced for both reliability and safety reasons. For example, the steel fasteners that connect BART's rails to the concrete trackways below require replacement. The program will fund replacement of this critical infrastructure. BART forecasts that the planned investments will result in fewer track-related delays, improving service on a daily basis as well as substantially reducing the risk of major failure that could affect passenger safety.



#### RENEW POWER INFRASTRUCTURE Estimated at 35% of Program, \$1,225 M

BART trains run on 100% electric power. The infrastructure that distributes electricity throughout the system and delivers power to trains is aging and in need of major refurbishment. This program will fund refurbishment and replacement of BART's power infrastructure to maintain and improve service reliability. This investment category will fund the following types of projects:

- Replace original power distribution infrastructure. A network of power cables distributes electricity throughout the BART system. Many of these cables are original to the system and are at growing risk of failure. In addition, key locations in the system lack redundancy; failure at any of these locations will result in long-term delays in BART service and extended periods of increased regional traffic congestion. This program funds repair and replacement of approximately 90 miles of original power distribution infrastructure.
- **Refurbish and replace electrical substations.** BART has 62 substations that convert electricity to the proper

voltage and deliver it to the third rail to power trains. Many of these substations are original to the system and require constant attention to keep them operational and safe. This program funds replacement of high-priority electrical substations to maintain and improve service reliability.

• Replace and upgrade backup power supplies. Safe, reliable train operations require an uninterrupted supply of power at BART facilities. The program will allow BART to replace the aging emergency generator at its central operations control center, and the backup power supplies that ensure continuous power to train control equipment, communication equipment, and emergency lighting at multiple BART stations.

Renewed power infrastructure will make service more reliable and more resilient. These investments will significantly reduce the risk of severe BART service disruptions that could impact regional traffic for an extended period of time.

#### REPAIR TUNNELS AND STRUCTURES

Estimated at 16% of Program, \$570 M

BART tracks are supported by a range of structures and tunnels to provide service throughout the region. Like much of the system's infrastructure, these tunnels and support structures have been in use for decades and some are in need of major rehabilitation. Repairing damage to key structures will support continued passenger safety and reliable BART operations. This investment category will fund the following types of projects:

• Repair damage from water intrusion in the Market Street tunnels. BART's aging Market Street tunnels have suffered significant damage as a result of water intrusion. Over time, water leaks damage the tunnel walls as well as the rails inside, increasing the risk of both service delays and potential safety problems. For example, in May 2015 track damage due to water intrusion caused a track failure near Civic Center Station that delayed BART service for several hours, severely impacting regional traffic congestion. This program funds repairs to water intrusion in the tunnels, reducing the risk of major safety problems and improving service reliability.

- Repair damage from water intrusion in stations. Water intrusion has also damaged structures at BART stations, including platforms and trackways. This program will fund repair to structures at 16 stations.
- Repair Hayward Earthquake Fault Creep within the Berkeley Hills Tunnel. The continuous movement of the Hayward Fault near the western edge of the Berkeley Hills Tunnel has caused the tunnel to shift from its original position. BART must realign the tunnel for safety reasons. This realignment will involve modifications to the concrete interior and walkway inside the tunnel.





#### RENEW MECHANICAL INFRASTRUCTURE

Estimated at 4% of Program, \$135 M

BART service relies on critical mechanical infrastructure, including fire suppression systems, tunnel emergency ventilation systems, heating, ventilation and air conditioning systems, water pumps, train repair shop compenents, generators, fueling facilities, and others. Most of these systems are over 40 years old. While invisible to passengers, they are vital to keeping trains running normally. This program will fund renewal of this mechanical infrastructure to ensure safety and reliability. This investment category will fund the following types of projects:

• **Refurbish and replace fire safety systems.** A network of pumps and sprinklers throughout the BART system helps keep people safe and protects important equipment from fire damage. This infrastructure is aging and must be replaced. The program will fund replacement of sprinklers as well as the complex fire suppression infrastructure that protects train control rooms.

- Refurbish and replace water management infrastructure. BART's water management infrastructure prevents flooding of important facilities, including the Transbay Tube, and allows the system to comply with environmental regulations. Excessive flooding can result in closed stations or trackways. The program will allow BART to refurbish and repair water infrastructure that is aging and at risk of failure, protecting critical infrastructure and maintaining the safety and reliability of the train system under all conditions.
- Refurbish and replace repair shop infrastructure. BART's repair shops have specialized mechanical infrastructure that is necessary to keep trains running. The program will allow BART to refurbish and replace this aging infrastructure, improving the efficiency of maintenance work and keeping more rail cars on the tracks.

Repairing mechanical infrastructure will reduce risks to passenger safety, improve service reliability, and help to minimize future maintenance costs.







#### REPLACE TRAIN CONTROL AND OTHER MAJOR SYSTEM INFRASTRUCTURE TO INCREASE PEAK PERIOD CAPACITY Estimated at 12% of Program, \$400 M

To meet growing demand, BART must increase train service at the highest-demand times and places. However, several important elements of the BART system, including the train control system, rail car storage and maintenance facilities, and power systems, are already operating at capacity. The program will allow BART to upgrade this infrastructure enough to increase BART's peak period passenger capacity. This investment category will provide funding for the following types of projects:

• Replace major train control system infrastructure. A train control system consists of both hardware and software that are used to control speed and movement on the rail network, keeping trains running smoothly and eliminating any

possibility of a collision. The system BART uses today is a modified version of the original system put in place 44 years ago, and it has two major limitations. First, errors in the aging system are a major cause of train delay. Currently, more than half of BART's infrastructure-related delays are due to errors in the train control system, causing BART riders to suffer from more than 400 hours of delay annually. Second, the system was not built to handle the demands of 2015 and beyond; it can safely accommodate no more than one train every 2.5 minutes on all lines combined through the Transbay Tube.

This program (and other funding sources leveraged through the program plan) will replace important train control infrastructure with upto-date technology, allowing trains to operate at more closely spaced intervals and at faster speeds, permitting 25% more trains through the Transbay Tube. At the same time, a new, modern train control system will improve BART's reliability, decreasing train control-related delays and enhancing safety by upgrading the reliability of the technology that prevents train collisions.

- Upgrade traction power capacity. When BART's power infrastructure was designed in the late 1960's. today's level of demand for service was not envisioned. To enable BART to run more train service, the system must have more electrical power in the Transbay Tube and in downtown San Francisco than the system is designed to handle. The program will allow BART to add needed traction power cables and electrical substations to supply more electrical power in these critical parts of the system, allowing BART to fully utilize the modern train control system.
- Expand vehicle storage and maintenance capacity. To take advantage of the capacity offered by the replaced train control system and added traction power capacity. BART must also prepare to operate a larger fleet of rail cars. New cars will be acquired through BART's Fleet of the Future program, which is separate from this program and includes a significant amount of federal funding. However, BART will not be able to operate this larger fleet without expanded maintenance facilities. This program funds expansion and reconfiguration of BART's existing maintenance facility in Hayward, giving BART the ability to service the existing fleet more efficiently, and to store and to maintain the larger Fleet of the Future, which is essential for providing more service than is offered today.

BART Operations Planning staff estimates that these investments, combined with the planned increase in the rail car fleet, will work together to increase BART's peak period passenger capacity in the Transbay corridor by 36%; this is equivalent to adding another three lanes in each direction on the Bay Bridge.

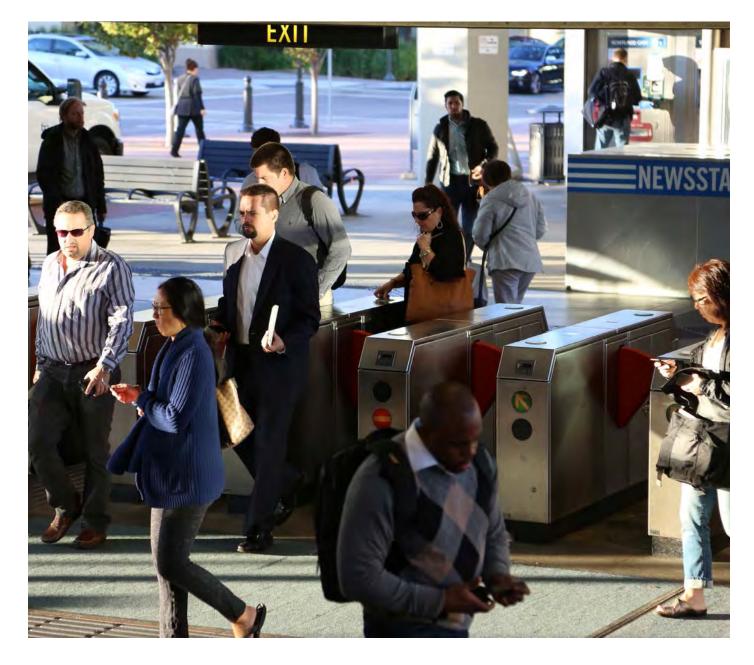
#### **RENEW STATIONS**

Estimated at 6% of Program, \$210 M

The program plan will allow BART to renew its aging stations, improving comfort, safety and security, and overall station capacity. By inviting more riders into the BART system, these investments will also help to keep cars off the road. Examples of projects in this area include:

- Invest in safety, security, and reduced fare evasion. BART will invest in enhanced station lighting and better sight lines to improve passenger safety and security, and invest in new infrastructure to improve security and reduce fare evasion.
- Repair, replace, and upgrade escalators and elevators to increase capacity and improve stations for people with disabilities. BART will invest in replacing, and providing canopies to weatherproof system escalators to ensure fast and convenient access to and from platforms, with a particular focus at the busiest subway stations on Market and Mission Streets in San Francisco, and in downtown Oakland. BART will also add new elevators and reconfigure existing elevators. These investments are crucial both for enhancing the capacity of the most crowded stations, and for providing safe, comfortable access for all, particularly seniors, people with disabilities, and families with strollers.

• Upgrade stations to better reflect and connect to surrounding communities. BART stations are gateways to existing communities and targeted sustainable growth areas. These funds will leverage planned station renovation projects, for example at Balboa Park, Civic Center, Concord Downtown Berkeley, Richmond, and West Oakland, to install design elements, and art that will improve the experience of stations for passengers while better connecting those stations to surrounding communities.





#### expand opportunities to safely access stations

The program plan will improve safe and reliable access to the BART system by renewing BART stations and by enhancing opportunities to access those stations. The program also sets aside a small percentage of the overall bond investment to prepare for the next generation of regional transportation needs including investments in efficiency, resiliency, and system capacity.

#### EXPAND OPPORTUNITIES TO SAFELY ACCESS STATIONS Estimated at 4% of Program, \$135 M

BART's stations are the gateways to the system. However, like much of the rest of the system, many of BART's stations are more than 40 years old and are in need of renewal. Key stations, such as Montgomery and Embarcadero, have substantial crowding issues on platforms and escalators during peak times. As demand for BART has grown, crowding has also increased for those trying to access BART. Parking for both vehicles and bicycles reaches capacity early in the morning at many BART stations. At the same time, aging and out-of-date facilities at original stations limit many BART riders who might like to reach stations on foot, on buses, or using emerging ride-sharing services.

The goals of BART's access program include: a healthier, safer, and greener BART system; more riders; a more efficient and productive system; a better rider experience; and equitable services.

BART will leverage funding from the program plan with funds from several sources, including

#### Addresses Goals



10% of Program

\$335 Million

BART parking fees as well as state, local, and regional grant funds, to enhance access opportunities throughout the BART system in a way that best addresses these goals. Examples of projects in this category include:

• Enhance access for seniors and people with disabilities. The program will fund projects to enhance station accessibility and ensure that stations are available to all. BART will make improvements to escalators and elevators to increase reliability for seniors and people with disabilities. BART also has plans to replace handrails and guardrails at 34 stations, upgrade the public address systems so passengers can better hear important announcements and improve customer safety by renovating the fire alarm system to include flashing strobe lights designed to alert those with hearing issues during an emergency.

- Improve parking availability. The program will fund projects to improve the availability of parking systemwide. Improved parking management strategies will be combined with efforts to increase the supply of parking for BART riders at stations where it can be done cost-effectively and in partnership with local communities.
- Expand bicycle facilities. The program will fund implementation of BART's Bicycle Capital Plan, which focuses on enhancing secure bicycle parking throughout the system. BART's plan calls for adding 6,000 secure bicycle parking spaces to help achieve the goal of accommodating bike parking for 8% of BART passengers. New secure bicycle parking facilities are now planned at Pleasant Hill, Concord, MacArthur, and Lafayette Stations. Stations that will require secure bicycle parking facilities in the next five years include Lake Merritt, San Leandro, West Oakland, Rockridge, Glen Park, North Berkeley, Del Norte, and Dublin/Pleasanton Stations. BART will also partner to help implement the expanded Bay Area Bike Share program and other important bicycle projects.
- Renew bus intermodal facilities. Many of BART's bus intermodal facilities were designed and built decades ago. The program will fund projects to upgrade these facilities to be more efficient for passengers and bus operators, to feel safer and more comfortable, and to better fit into surrounding communities. Added real-

time arrival information will make bus ridership more convenient. BART will also invest in projects to meet growing demand for drop-off and pick-up zones.

Access planning will be carried out on a station-by-station basis, with a focus on a cost-effective package of investments that respond to the local context and the needs of BART customers.

DESIGN AND ENGINEER FUTURE PROJECTS TO RELIEVE CROWDING, INCREASE SYSTEM REDUNDANCY, AND REDUCE TRAFFIC CONGESTION Estimated at 6% of Program, \$200 M

As early as the 1950's, forward-thinking Bay Area residents had the vision to anticipate the region's growing need for safe, reliable, efficient transportation and created the BART system. In the years since, BART system ridership has grown in parallel with the regional economy. BART has absorbed a large share of new travel demand, keeping hundreds of thousands of cars off the region's crowded roadways every day and helping major job centers to emerge and thrive in places that would not have otherwise been possible.

This program will make the core system more efficient and resilient, provide redundancy to speed up recovery from delays, and prepare for the next generation of regional transportation needs. In the near-term, these projects could include rail crossovers, storage tracks, turnbacks, station platform doors, and ultimately, a second Transbay crossing. Investments in this category will be used to evaluate, design, engineer, and perform environmental studies, subject to funding eligibility requirements, for infrastructure projects to help meet the growing demand for BART service.

### **Benefits of the Plan**

#### **Building a Better BART**

BART modeling shows that without reinvestment, the condition of BART's essential infrastructure will worsen over time.<sup>8</sup> A study lead by UC Berkeley professor Elizabeth Deakin found that with a decline in the reliability of the BART, thousands of riders would choose to drive, causing major daily bottlenecks along Highway 24, I-80, I-880 and I-580.

Through this program, BART will work to halt and reverse the deterioration of system infrastructure. Among the goals of the program will be to reduce risk to BART and its riders, and to achieve a system that is less costly to maintain than it would be without the program.





### Safety: Keeps riders and employees safe and secure

BART has no higher responsibility than keeping its riders and employees safe. Over its 44 years of service to the Bay Area, BART's safety record is as strong as any transit service in North America. That record is maintained by the vigilance of BART system workers and sound system management practices that have prevented collisions, derailments, and other major system failures. By contrast, other transit systems of similar age have already begun to experience major safety incidents related to aging infrastructure.

The program plan will help to preserve BART's strong safety record and maintain the region's confidence in the system. For example:

- Rail renewal will allow BART to continue to safely operate at normal speeds throughout the system.
- A new, modern train control system will allow BART to operate more frequent service safely.
- Repairs to tunnels and structures will ensure that these structures are safer for riders and workers.
- Investments in improved lighting and other facilities at BART stations will help to enhance the passenger experience, facilitate easy access to the system, and improve personal security in and around BART stations.



#### Reliability: Keeps BART dependable

After more than four decades of service, reinvestment to repair and replace the system's critical infrastructure is essential to restoring the high level of reliability that Bay Area travelers have come to depend on from BART. The program plan will yield a system with 40% fewer delays caused by mechanical issues than occur today, a savings of 250 hours of delay each year. For example:

- The new, modern train control system will cause fewer delay incidents than the current aging system, which was responsible for more than half of all infrastructure-related delays in 2014.
- Replacing 90 miles of original rails and rebuilding the system's major rail merges will reduce delay incidents caused by track failures. Even more

importantly, these projects will substantially reduce the risk of major failures that could cause the system to encounter severe, ongoing delays now faced by other rail systems around the country.

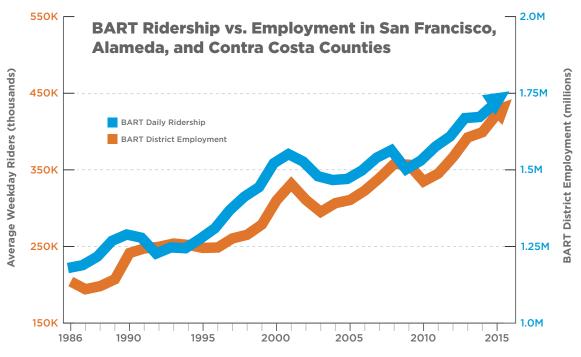
- Renewing BART's power infrastructure will reduce delays. By adding redundancy to the power infrastructure, BART will be far less likely to suffer severe and ongoing delays that could have major impacts on regional traffic.
- The elements of the program plan that enhance system capacity also play a role in making the system more reliable. With less crowding on trains and platforms, BART will be able to recover more quickly from any delays that do occur.

#### Crowding relief: Reduces traffic, protects the environment, and makes room for the economy to grow

Over BART's 44-year history, system ridership has grown in step with the regional economy, relieving pressure on the region's crowded highways. Today, however, BART ridership is at or above its maximum capacity in major segments of the system during peak commute hours. Investments in BART capacity will relieve crowding and allow BART to continue to take more cars off the region's roads. For example:

• A set of investments in system capacity, including a modern train control system, an expanded train car maintenance facility in Hayward to accommodate a larger fleet of rail cars, and more power capacity, will provide space for approximately 36% more riders in the Transbay market – equivalent capacity to another three lanes in each direction on the Bay Bridge.

- BART's proposed station investments, including the overhaul of station escalators and reconfiguration of platform elevators, will be important to relieving crowding at the busiest stations and allowing BART ridership room to grow.
- By providing an alternative to driving for many trips, BART helps keep cars off the road, reducing emissions and improving the region's air and water quality. By keeping BART safe and reliable while making space for more riders, the program will preserve these environmental benefits for future generations.



Source: BART Ridership Reports; US Census, Bureau of Labor Statistics Quarterly Census of Employment and Wages

### **Organizational Structure**

### Governing body and administration

In enacting this measure, voters will authorize BART to administer the bond proceeds in accordance with all applicable laws and with the program. Funds collected may be spent only for the purposes identified in the program, as it may be amended as described in the implementation guidelines. Under no circumstances may the proceeds of this bond measure be applied to any purpose other than for investment in the BART system. Under no circumstances may these funds be appropriated by the State of California or any other governmental agency.

BART is governed by the BART Board of Directors, which is comprised of nine members elected from the nine BART districts in Contra Costa, Alameda, and San Francisco Counties. Board members serve a four-year term.

#### **Independent oversight**

There will be an Independent Oversight Committee (IOC), which will have the responsibility of reviewing and overseeing all expenditures of program funds. The Independent Oversight Committee reports directly to the public and has the following responsibilities:

• The IOC will track progress and effective use of funds. The IOC will meet quarterly to review project progress and monitor effective use of funds.

- The IOC meetings must be open to the public and must be held in compliance with the Brown Act, California's open meeting law, with information announcing the hearings well-publicized and posted in advance.
- The IOC will have full access to an independant auditor supplied by BART and will have the authority to request and review specific information regarding use of program funds and to comment on the auditor's reports.
- The IOC will publish an independent annual report, including any concerns the committee has about audits it reviews. The report will be made available to the public in a variety of forums to ensure access to this information.

IOC members are private citizens who are not elected officials at any level of government, nor public employees from agencies that either oversee or benefit from the program. Membership is limited to individuals who live in the BART District. Members are required to submit a statement of financial disclosure annually, and membership is restricted to individuals with no economic interest in any of BART's projects or programs.

### **Implementing Guidelines**

#### **Duration of the Plan**

BART anticipates that the 2016 System Renewal Program Plan will be implemented over the course of twenty-one years, commencing in Fiscal Year 2017 and concluding in Fiscal Year 2038. Projects will be accelerated as practical to maximize the benefit of planned improvements as quickly as possible.

#### **Project Selection and Prioritization**

BART uses a Strategic Asset Management Program (AMP) to guide decisions about system reinvestment, minimize risk, and maintain financial stability. The AMP relies on detailed, ongoing data collection about each asset in the system, and follows international best practices to assess the likelihood of nearterm failure for each asset and understand the impact that such a failure would have on the BART system, its riders, and the region.

The AMP process will be used to guide decisions about the appropriate timing of the projects funded by this program. The process will allow BART's staff and Board of Directors, with input from the Independent Oversight Committee, to take a systematic, risk-focused approach to guide which investments will be undertaken and in what order.

The process for selecting investments from this program will be closely coordinated with BART's larger capital program.

The process will proceed as follows:

- Understand critical reinvestment needs as they arise: On an ongoing basis, BART staff will use the Strategic Asset Management process to rank the highest-priority reinvestment needs.
- **Prioritize reinvestment projects every year:** Annually, BART staff and Board of Directors will use the prioritized list of needs from the Strategic Asset Management process to develop a list of key system reinvestment projects to be funded in the following year.
- Review investments with the Independent Oversight Committee: The Independent Oversight Committee will review the identified project list.
- Integrate projects with the larger BART capital program: The selected projects will be integrated into BART's larger Capital Improvement Plan and associated capital budget.
- Adopt the capital program in a publicly noticed hearing: The capital budget will be reviewed and adopted by the BART Board of Directors following a publicly noticed hearing.
- Review project implementation with the Independent Oversight Committee: The Independent Oversight Committee will meet throughout the year to review progress on project implementation.

Because it is impossible to know the exact cost of renewal projects before implementation, bond resources have been divided into two major spending areas:

- Repair and replace critical safety infrastructure (\$3,165 M, 90% of Program)
- Relieve crowding, reduce traffic congestion, and expand opportunities to safely access stations (\$335 M, 10% of Program)

Spending in the two major investment categories is fixed.

As BART tailors investments to respond to system needs, actual spending within each of the two major categories may vary by up to 15% of the total. For example, if the tunnels and structures repair projects need less of this funding, up to 15% of the grand total for repairing and replacing critical safety infrastructure (15% of \$3.165B) can be shifted to another of the projects within that category such as renewing power infrastructure. However, BART could not transfer that 15% savings to projects in the other major category to expand opportunities to safely access stations.

#### Taxpayer Safeguards, Audits, and Accountability

Accountability is of utmost importance in delivering public investments with public dollars. BART is committed to transparency and accountability as a public agency. Many safeguards are built into this measure to ensure voter accountability in expenditure of funds.

• Annual audits and independent oversight committee review: BART's financial reports are subject to an independent audit by a Certified Public Accountant (CPA) firm, on an annual basis. Expenditures are also subject to an annual review by an Independent Oversight Committee. The Independent Oversight Committee will prepare an annual report on spending and progress in implementing the Plan that will be published and distributed throughout the BART district. On a periodic basis, the Independent Oversight Committee will review the performance and benefit of projects and programs based on performance criteria established by BART as appropriate.

- **Annual Capital Budget:** Each year, BART will adopt a capital budget that includes an estimate of bond proceeds, other anticipated revenues and planned expenditures. The budget will be adopted at a public meeting of the BART Board of Directors.
- Capital Improvement Program Updates: Project descriptions will be detailed and fully defined for inclusion in BART's Capital Improvement Program, which will be updated every two years. The Capital Improvement Plan will be adopted at a public meeting of the BART Board of Directors.

#### **Restrictions on Funds**

The San Francisco Bay Area Rapid Transit District has the authority to expend these funds, if approved by the voters, only as permitted by the California Constitution. They may only be used for the acquisition or improvement of real property and would not, therefore be able to finance transit vehicles and other equipment used for BART operations.

• Expenditures are restricted to investment in the BART system: Under no circumstances may the proceeds of bond measure be applied to any purpose other than for investment in the BART system. Under no circumstances may these funds be appropriated by the State of California or any other governmental agency.

- No general operating expenditures: The proceeds of the bond measure cannot be used to support BART's general operating needs, but must be dedicated to the capital program outlined in this Program Plan.
- Environmental and equity reviews: All projects funded by the bond measure are subject to laws and regulations of federal, state and local government, including but not limited to the requirements of the California Environmental Quality Act (CEQA), and Title VI of the Civil Rights Act, as applicable. All projects and programs funded in this Plan will be required to conform to the requirements of these regulations, as applicable.

#### **Project Financing Guidelines**

- Fiduciary duty: The authorization of this Bond measure gives BART the fiduciary duty of administering the proceeds for the benefit of the residents of the BART district. Funds may be accumulated by BART over a period of time to pay for larger and longer-term projects. All interest income generated by these proceeds will be used for the purposes outlined in this Plan and will be subject to audits.
- Leveraging funds: Wherever possible, BART will use bond proceeds to leverage or match funds from outside funding sources, including state, federal, and regional funds.
- **Fund allocations:** Should a planned project become undeliverable, infeasible or unfundable due to circumstances unforeseen at the time this Plan was created, or should a project not require all

funds programmed for that project or have excess funding, funding for that project will be reallocated to another project or program of the same type, such as repair and replace critical safety infrastructure, relieve crowding and reduce Bay Area traffic congestion, or improve safety and access to the BART system, at the discretion of BART.



BETTER BART. BETTER BAYAREA.

# IT'STIMETOREBUILD.





### ALETTER FROM THE GENERAL MANAGER

BART is a precious public resource. Every day, we connect hundreds of thousands of people to the countless opportunities the Bay Area has to offer. Thanks to the enormous amount of input local leaders and residents have provided us, we have a strong plan to reinvest in our aging system.

Our plan puts us on the right path toward building a better BART, and we're committed to transparency, accountability, and integrity every step of the way.

Jace Crunica

Grace Crunican BART General Manager

### BUILDING A BETTER BART.



#### **FIXING IT FIRST**

After 44 years of service and hundreds of millions of trips, it's time to repair, replace and renew the parts of BART that keep you moving. Our new fleet of train cars will arrive soon—and when they do, we will need smooth rail, well-maintained tunnels, and more electricity to power us through the commute. From earthquake safety to structure repairs, our first priority is ensuring that everything working in the background stays working—and safe.





#### **RELIEVING CONGESTION**

The Bay Area is a unique, magnetic place. As our population increases, BART's goal is to make sure growing pains don't get in the way of either new opportunities or our destinations. We plan to upgrade our computers from Pong-era technology to a modern train control system, which means less waiting around on crowded trains or platforms and less frustration from delays. The new, additional maintenance facilities we plan on constructing will keep the maximum number of trains out on the rails serving customers—translating to fewer cars clogging our congested highways.





#### **IMPROVING ACCESS**

How you get to BART matters just as much as how BART gets you where you need to be. Our plan includes improving customer access within and around our stations—from more parking, to new escalators and elevators, to bike stations. BART is for everyone, and we want to reduce the number of obstacles between your front door and a seat on a train.



## SO WHAT'S IN THE PLAN?



#### 90 Percent of the Program Plan

#### \$3,165 Million

#### **REPLACING WORN TRACK**

BART gets extra life out of our rail because we have some of the lightest train cars in the country— but even the strongest steel wears down over time. We're replacing 90 miles of our worn, original rail with tougher, harder steel that will last even longer than what we first installed during the '60s and '70s. This new rail means you'll have a smoother, safer, and quieter ride.

#### **POWERING THE SYSTEM**

Even though we use the cleanest energy of any public transit system in the United States, we still use an enormous amount of electricity to keep our trains—and you—moving along to your destination. Most of the parts of our system that convey power—miles of cabling, substations, converters, and backup supplies—are original components from 1972 and in a state of age-related disrepair. As the Fleet of the Future arrives and we ramp up the number of trains out on the tracks, our need for electricity will increase. More trains require more power, which adds to the stress our power system already faces on a daily basis. Energy infrastructure replacement is both time-consuming and expensive, but without it—nobody moves. Its replacement is the largest and most critical portion of BART's future needs.

#### WATERPROOFING OUR TUNNELS

Some of our stations in downtown San Francisco are below sea level, and numerous natural water sources constantly threaten to flood our tunnels. BART has an extensive safety net of water pumps and engineering solutions in place, all quietly working in the background to safeguard our subways. However, much of this safety net is reaching the end of its useful life, and small amounts of water are leaking into the tunnels. While there is no immediate risk of catastrophic flooding, humidity does build up on the rails, and—just like how potholes start—every time trains run over the moisture tiny fractures form. These tiny fractures can, in extreme cases, cause the rail to break as is what happened in early 2015, causing hours of delays. Maintaining our tunnels and keeping moisture out is a top priority.



#### FIGHTING THE FAULT LINES

Earthquakes are the greatest natural hazard facing Bay Area residents, thanks to a number of fault lines crisscrossing the region. One of these major fracture zones, the Hayward fault, lies below the Berkeley Hills Tunnel under BART's yellow line. The eastern and western portions of Contra Costa County slowly slide north and



south against each other, which over the years has led to misaligned track. Since the late '60s, the misalignment in the Berkeley Hills Tunnel has increased in size to the point that trains are getting very close to the tunnel walls—and something must be done to ensure straight, safe, track between Rockridge and Orinda. BART engineers have proposed several solutions to fight the creeping fault line. People may not often seethe work that goes on behind the scenes, but the tools we use are an essential part of BART. Without them, work backs up and fewer cars are available when we need them.



#### MODERNIZING TRAIN CONTROL

Our automatic train control system—the part of BART that tells trains where to go, how fast they should get there, and where they are in relation to other trains—was considered cutting edge technology in 1972. It set the bar for high-tech public transit, and was the envy of the world for a period of time. However, its limitations are causing delays here in 2016 and preventing trains from running closer together. A new, modernized train control system means less waiting on platforms, more frequent and less crowded train arrivals, and fewer service disruptions. In fact, over half of all BART delays in 2015 were related to our antiquated, Pong-era train control system.

#### **RENOVATING OUR STATIONS**

Many BART stations were originally designed to handle a much smaller number of daily passengers. Crowding puts extra stress on our ticket machines, fare gates, escalators, and elevators—and outdated design elements in some stations can make it difficult to find your way.

New weatherproofing plans include canopy

enclosures to protect our escalators and station entrances from weather, vandalism, and misuse. Improvements are currently underway, with backlit station names and clear navigational signposts already being installed in downtown San Francisco and elsewhere throughout the system.

#### BACKING UP OUR SYSTEM

BART's train yards and shops spring into action at the end of every night, rapidly tuning up train cars, making repairs, and preparing for the next day of service. Many of our shops are in need of refurbishment, and other systems running in the background like fire suppression and water management also need an overhaul.





#### 10 Percent of the Program Plan

#### \$335 Million

#### **BRINGING YOU TO BART**

How you get to BART matters just as much as how we get you where you need to be. Our existing parking lots are full to the brim—and there are a number of ideas in the works for how we could expand options while also connecting to and improving bus access. For cyclists, we've already begun opening Bike Stations at locations throughout the areas we serve—with intent to expand. Secure bike parking keeps cars off the road, and pollution out of the air. Also part of BART's strategy for improvement is our plan to reduce barriers for senior riders or our differently abled passengers. Replacing our difficult-to-hear public announcement speakers, guardrails, and handrails will help everyone safely find their way.

#### **EXPANDING OPTIONS**

When BART needs to quickly move a train from one area to another, we rely on having specialized tracks called crossovers. Crossover tracks are like a passing lane for trains—meaning that if there's a blockage up ahead, we have the flexibility to move trains around whatever is causing the problem. This flexibility lessens delay times and helps us keep passengers on their way to their destinations in a timely manner. In addition, BART is laying down definite plans for new storage tracks, additional rail to mirror existing service, and many other projects to help increase the number of people who can ride on BART.

Summary of Investments	\$ Millions	% of Total Bond
REPAIR AND REPLACE CRITICAL SAFETY INFRASTRUCTURE	\$3,165	90%
Renew track	\$625	18%
Renew power infrastructure	\$1,225	35%
Repair tunnels and structures	\$570	16%
Renew mechanical infrastructure	\$135	4%
Replace train control and other major system infrastructure to increase peak period capacity	\$400	12%
Renew stations	\$210	6%
RELIEVE CROWDING, REDUCE TRAFFIC CONGESTION, AND EXPAND OPPORTUNITIES TO SAFELY ACCESS STATIONS	\$335	10%
Expand opportunities to safely access stations	\$135	4%
Design and engineer future projects to relieve crowding, increase system redundancy, and reduce traffic congestion	\$200	6%
TOTAL	\$3,500	100%

Note on Governance: Governance measures will include an independent oversight committee, spending restrictions, and annual audits. Funding cannot be taken away by the state. Note on Planned Expenditures: Spending in the two major investment categories is fixed. As BART tailors investments to respond to system needs, actual spending within each of the two major categories may vary by up to 15% of the total. For example, if the tunnels and structures repair projects need less of this funding, up to 15% of the grand total for repairing and replacing critical safety infrastructure (15% of \$3.165B) can be shifted to another of the projects within that category such as renewing power infrastructure. However, BART cannot transfer that 15% savings to projects in the other major category to expand opportunities to safely access stations.

### PROTECTING PUBLIC TRUST.

#### **INCLUDING YOUR INPUT**

Our plan is based on hard data—collected using international best practices and a strong internal accountability program (asset management software) which gives us the exact life span for all the different physical parts of BART. We've also held over 200 meetings with diverse community groups throughout the Bay Area to give our plan context, and to get an idea of how we can improve the lives of the people we serve. We've included elected officials, businesses, labor groups, environmental organizations, seniors, disability advocacy groups, community organizers, social justice advocates, and individuals in this process and remain committed to having an open conversation about our future. We've received over 1,500 responses to date, and continue to educate and listen wherever we go.

#### SAFEGUARDING YOUR INVESTMENT

In 2004, voters approved \$980 million for BART's earthquake safety program. Since then, we've proven ourselves to be a responsible and trustworthy steward of public funds. We've reinforced parking garages, strengthened maintenance facilities, fortified stations, and protected the Transbay Tube—guarding our riders against the threat of earthquakes while building trust and saving millions of dollars.

The bond measure is projected to cost property owners between \$0.80 and \$17.49 per \$100,000 in assessed value, for a weighted average of \$8.98 per \$100,000 in assessed value over the life of the bond. If the bond measure passes, an Independent Oversight Committee will be established to ensure our plans are carried out with an excess of transparency, accountability, and integrity. The Committee will be able to regularly audit BART, and will publish an annual, public, independent report outlining any concerns that could arise from how we carry out our plan.

#### **REPRESENTING YOUR INTERESTS**

BART's governing structure is open and democratic—nine elected officials represent the people of various districts in Alameda, Contra Costa, and San Francisco counties. Visit **www.bart.gov/about/bod** to find out who represents you, and how you can make your voice heard.

To download a pdf of the 2016 System Renewal Program Plan, visit us at www.bart.gov/ about/financials



Visit the Better BART website for the latest updates on how we're building a better BART.

www.bart.gov/BetterBART



Send us a tweet to start the conversation. We'll answer any questions you have as quickly as possible.

@SFBART



Interested in finding out more? Contact us to request a personal presentation from BART to you and your group.

#### BetterBART@bart.gov



BART is for everyone—show us how we move you. Tag us on Instagram to be included on the Better BART site.

#BetterBART

BETTER BART. BETTER BAY AREA.

