

2023 Prop L 5-Year Prioritization Program

# **BART Maintenance, Rehabilitation, and Replacement**

Approved: October 24, 2023



**San Francisco  
County Transportation  
Authority**

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This report was prepared by the San Francisco County Transportation Authority in coordination with the San Francisco Bay Area Rapid Transit District (BART).



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# 1. Introduction

In November 2022, San Francisco voters approved Proposition L (Prop L), extending the ½-cent sales tax to fund transportation improvements and approving a new 30-year Expenditure Plan, which superseded the prior Proposition K Expenditure Plan. The Prop L Expenditure Plan determines eligibility for sales tax funds through a list of 28 programs. It also sets caps for the maximum amount of Prop L funds that will be available for specific programs over the 30-year Expenditure Plan period, totaling up to an estimated \$2.6 billion (2020 \$'s). In order to fully fund the programs, the Expenditure Plan assumes that the Prop L dollars will leverage (or match) another \$23.7 billion (2020 \$'s) in other federal, state, regional, and local funds for a total program cost of \$26.3 billion (2020 \$'s). Some of those leveraged funds will be distributed to San Francisco through funding formulas. In other cases, San Francisco project sponsors will have to aggressively compete for discretionary funds in order to fully fund the Expenditure Plan programs.

The Expenditure Plan includes a number of requirements, including the development of 5-Year Prioritization Programs (5YPPs) as a condition for receiving allocations in each program in the Expenditure Plan. The 5YPPs are intended to provide a stronger link between project selection and expected project performance, to support on time, on-budget project delivery, and optimize use of federal, state and regional matching funds. Other major benefits of the 5YPPs include:

- Provide transparency about how Prop L projects are prioritized,
- Enable public input early and throughout the planning process, and
- Improve agency coordination within and across projects at the earlier stages of the planning process.

The desired outcome of the 5YPPs is the establishment of a strong pipeline of grant-ready transportation projects that can be advanced as soon as funds (including Prop L, federal, state, and other funds) are available. The 5YPPs are critically important to help achieve the leveraging needed to fully fund the Expenditure Plan programs.

As its centerpiece, each 5YPP contains a 5-year Program of Projects (or project list), ideally including project descriptions, schedule milestones, cost estimates, and full funding plans showing Prop L funds by fiscal year and other matching funds. The Program of Projects (project list) for BART Maintenance is contained in Section 7 of this document.

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## 2. Eligibility and Expected Fund Leveraging

### 2.1 | ELIGIBILITY

Eligibility for BART Maintenance as identified in the voter approved Prop L Expenditure Plan is as follows, with amounts shown in millions of 2020 dollars:

“Programmatic improvements for the upgrade, rehabilitation, and replacement of BART’s capital assets. Eligible project types include, but are not limited to, the upgrade, rehabilitation, and replacement of: transit vehicles and on-board equipment; transit stations including platform edge tiles, elevators, escalators, and faregates; transit facilities and facilities-related equipment; and guideways such as rail, train control, traction power, and related equipment. Facilities and guideways improvements may include upgrades to improve resilience to climate change. Additional elevators, escalators, and faregates are also eligible. In shared BART/Muni stations, elevator and escalator projects must include shared Muni access and/or redundancy where cost effective. Includes project development and capital costs. The first \$35M is Priority 1 and the remainder is Priority 2. Sponsor Agency: BART. Total Funding: \$547.7M; EP: \$45M.”

BART stands for the San Francisco Bay Area Rapid Transit District. Priority 1 funds correspond to the conservative sales tax revenue forecast and Priority 2 to the optimistic forecast.

### 2.2 | EXPECTED FUND LEVERAGING

Leveraging Prop L funds against non-Prop L fund sources is necessary to fully fund the Expenditure Plan programs. Prop L sales tax funds will be used as seed funding for planning and project development to make projects competitive for discretionary fund sources, and to serve as local match needed to secure federal, state, regional, and other grant funding.

Based on Priority 1 (conservative forecast) funding levels, for BART Maintenance, the Prop L Expenditure Plan assumes that for every \$1 of sales tax revenue spent, on average it would be leveraged by about \$14.36 in non-Prop L funds. The Transportation Authority reviews leveraging at the project and project phase (e.g. planning, design, construction) levels as well as for each Expenditure Plan program as a whole.

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## 3. Public Engagement

Transportation Authority staff conducted public engagement to inform the development of the 5YPPs. This section summarizes feedback heard from that engagement, as well as information provided by project sponsors regarding public engagement and community support.

During the Prop L Expenditure Plan development, the Transportation Authority conducted a robust outreach process from Spring 2021 – Winter 2022. The New Expenditure Plan for San Francisco’s Half-Cent Sales Tax for Transportation: Outreach Findings report can be found on the Transportation Authority website. Key themes emerged from this process including support for transit maintenance and improving transit reliability and customer experience.

As part of development of the 2023 5YPPs, the Transportation Authority conducted outreach and hosted public meetings to gather input about which specific projects and project types should be funded through Prop L in the next five years and to seek input on how to select projects for each Expenditure Plan program. The meetings included a virtual meeting for interested members of the former Expenditure Plan Advisory Committee who helped develop Prop L and representatives of equity-focused community-based organizations; a virtual town hall; and presentations at community group meetings, as requested. There was also an online multi-lingual survey and opportunities for public input through the Transportation Authority’s website and at multiple Transportation Authority Community Advisory Committee and Transportation Authority Board meetings. The Transportation Authority website also includes a list of staff contacts to facilitate public engagement directly with project sponsors.

To learn more, visit [sfcta.org/ExpenditurePlan](https://sfcta.org/ExpenditurePlan). The findings from the 5YPP outreach process will be published on this webpage in September 2023. Key themes emerged from this process including support for improving transit reliability and strengthening transit investments in equity priority communities.

## 4. Performance Measures

Prop L requires the establishment of performance measures for each program in the Expenditure Plan. The intent is to demonstrate the system performance benefits of sales tax projects (e.g. reduced transit travel time), to ensure funds are being used cost effectively, and to inform programming of future Prop L funds, as well as programming and prioritization of other funds by the Transportation Authority (e.g. Transportation Fund for Clean Air, Prop AA Vehicle Registration Fee funds).

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After reviewing San Francisco’s Congestion Management Program and consulting with eligible sponsoring agencies, the Transportation Authority recommends that the following performance measures be applied to projects included in the BART Maintenance 5YPP:

- Next Generation Fare Gates: Reliability – annual Corrective Maintenance compared to prior years
- Maintain average fleet age at less than 2/3 of the Federal Transit Administration standard
- Increase mean distance between failures (MDBF) for relevant vehicle projects
- Maintains facilities and major equipment systems, guideways and vehicles in a state of good repair and replace within lifecycle standards

While not recommended as performance measures, the Transportation Authority will also track the following metrics for this program to understand trends:

- Elevator and escalator availability

## 5. Project Delivery Snapshot

Since this is the inaugural Prop L 5YPP, we are looking to the prior Prop K sales tax program to assess project delivery trends for similar types of projects. Project delivery for previously-funded projects is one important consideration when we evaluate project sponsors’ proposed requests for Prop L funding, particularly with respect to project readiness.

As required by the Prop L Expenditure Plan, the next 5YPP update will be informed by a citywide geographic distribution of sales tax project allocations and the distribution of projects located in Equity Priority Communities and/or benefiting disadvantaged populations.

### Prop K Project Delivery

Prop K has funded BART maintenance since 2005. Table 1 shows the Project Status of open BART maintenance grants under Prop K.

Table 1. Prop K Project Status

SPONSOR	PROJECT NAME	PHASE(S) FUNDED	FY OF ALLOCATION	ALLOCATED (AS OF JUNE 2023)	REMAINING BALANCE (AS OF 9/22/23)	OPEN FOR USE?
BART	Powell Station Modernization	Construction	2018/19	\$327,025	\$819	Yes
BART	Embarcadero Station: New Northside Platform Elevator	Construction	2019/20	\$1,000,000	\$1,000,000	
BART	Powell Station Modernization	Construction	2019/20	\$672,975	\$209,827	Yes
BART	Balboa Park Station Area Improvements	Construction	2021/22	\$250,000	\$215,329	Yes
BART	BART Accessibility Improvement Program	Construction	2021/22	\$950,000	\$950,000	
BART	Elevator Modernization Project, Phase 1.3: Powell St. and Civic Center	Design Engineering	2021/22	\$1,290,000	\$1,232,201	
BART	Traction Power Substation Replacement, Powell St. Station	Design Engineering	2021/22	\$1,500,000	\$631,617	
BART	BART Tunnel Water Intrusion Mitigation	Construction	2022/23	\$1,269,471	\$1,269,471	
BART	Hearing Loop at San Francisco Stations	Construction	2022/23	\$150,000	\$150,000	

Projects are sorted by allocation year, then name.

BART Maintenance projects face various delivery challenges. Several of these challenges and how BART is working to address them are described below.

The contract for the BART Accessibility Improvement Program was advertised in October 2022 and received a single bid that was later deemed non-responsive by BART Office of Civil Rights due to the contractor not meeting DBE goals and not submitting good faith efforts. In June 2023, BART reported that the project team determined to pursue construction via internal BART maintenance forces and will modify designs based on discussions.

The Powell traction power substation grant has been on hold due to BART engineering staffing challenges. In June 2023, BART reported that they are onboarding new engineers and consultants and anticipate resuming work on the substation by October 2023. BART's latest progress report indicated that the project is in the 95% design phase.

With respect to the proposed Prop L Next Generation Fare Gates project, BART plans to install a prototype of the new fare gate at the West Oakland BART station by the end of 2023 as a test to help work out any issues and apply those learnings going forward as fare gates are installed at stations systemwide. BART anticipates that fare gate installation will be carried out by internal forces but are prepared to bring on

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temporary help if necessary. BART has engaged an outside firm, McKinsey, to assist in the evaluation of the rollout schedule for the gate installations at stations.

## 6. Project Prioritization

The intent of establishing and documenting a methodology to select proposed projects is to provide the Transportation Authority Board, the public, and project sponsors with a clear understanding of how projects are prioritized for funding within each Prop L program. Working in consultation with project sponsors and drawing upon the Transportation Authority's experience with prioritizing projects for grant funding, Transportation Authority staff developed a set of Prop L program-wide criteria to help select projects in each of the 28 Prop programs. In addition, most programs also have program-specific criteria to inform priorities such as improving transit reliability and travel time or replacing assets at the end of their useful lives. The Prop L program-wide criteria include:

- Project readiness
- Relative level of need or urgency
- Benefit to disadvantaged populations
- Level and diversity of community support
- Leveraging

The above criteria, along with any program-specific criteria, are scored for each proposed project. In addition, the evaluation process also considers a fair geographic distribution and cost-effectiveness.

San Francisco's [Equity Priority Communities](#) are an important factor in assessing projects and benefits to disadvantaged populations. See the map on the Transportation Authority's website: <https://epc-map.sfcta.org/>

The Project Scoring Table in Section 7 shows the Prop L program-wide criteria, the program-specific criteria, criteria definitions, and maximum possible points for projects proposed for the BART Maintenance 5YPP. For each proposed project, the project sponsors first scored the project and then Transportation Authority staff reviewed and refined the scoring, as needed, to ensure consistent application of the prioritization criteria.



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## 7. Project List

This section shows how each project proposed for funding from BART Maintenance ranked based on the prioritization methodology described in Section 6; the 5-Year Program of Projects or Project List recommended for Prop L funds; and Anticipated Leveraging. The Project Information Form with details on scope, schedule, cost, funding is included in Appendix A.

The recommended project list would significantly advance funds, requesting \$12,525,000, or 378% of the baseline amount in the first five years of the 30-year program for the Next Generation Fare Gates project. Next Generation Fare Gates is an estimated \$90 million systemwide project to replace all BART fare gates to improve reliability, access, and the customer experience while reducing maintenance costs. The project has secured significant funding to leverage Prop L, including from other BART counties, and has executed a contract with a vendor.

**Prop L Project Submissions Evaluation - EP 07 BART Maintenance**

		Prop L-Wide Criteria					Program Specific Criteria			
District	Projects	Project Readiness	Relative Level of Need or Urgency (time sensitive)	Benefits to Disadvantaged Populations	Level and Diversity of Community Support	Leveraging	Safety	Need (Asset Useful Life)	Improves Efficiency of Transit Operations	Total
	Next Generation Fare Gates	5	2	2	1	2	0	4	4	20
	<b>Total Possible Score</b>	5	4	5	5	4	4	4	4	35
<b>Project Scoring Key:</b> Projects are assessed using Transportation Authority Board adopted Prop L-wide criteria and program specific prioritization criteria. In general, the better a project meets the criteria as defined, the more points the project is assigned.										
<b>Project Readiness:</b> Highest possible score is 5. Project is likely to need funding in the fiscal year proposed. Factors to be considered include, but are not limited to adequacy of scope, schedule, budget and funding plan relative to current project status (e.g. expect more detail and certainty for a project about to enter construction than design); whether prior project phases are completed or expected to be completed before beginning the next phase; and whether litigation, community opposition or other factors pose a significant risk to project advancement, as proposed.										
<b>Relative Level of Need or Urgency (time sensitive):</b> Highest possible score is 4. Project needs to proceed in the proposed timeframe to enable construction coordination with another project (e.g. minimize costs and construction impacts), to support another funded or proposed project (e.g. signal conduit installation coordination with a street resurfacing project) or to meet timely use of funds deadlines associated with matching funds.										
<b>Benefits to Disadvantaged Populations:</b> Highest possible score is 5. Project provides direct benefits to disadvantaged populations, including communities historically harmed by displacement, transportation policies, and projects that utilized eminent domain. Project directly impacts the ability of disadvantaged populations to access transportation (e.g. new or enhanced infrastructure, new service or improved service, improved safety, etc.), whether or not the project is directly located in an Equity Priority Community. Points are based on the description of benefits presented in the Project Information Form.										
<b>Level and Diversity of Community Support:</b> Highest possible score is 5. Project has clear and diverse community support, including from disadvantaged populations and/or was developed out of a community-based planning process.  Five points for a project that 1) is in an adopted community based plan or with evidence of diverse (neighborhood level and citywide) community support and 2) has documented support from disadvantaged populations. Three points for a project not in an adopted community based plan, but with evidence of support from both neighborhood stakeholders and citywide groups. Project does not have documented support from disadvantaged populations. One point for a project not in an adopted community based plan, but with evidence of support from either neighborhood stakeholders or citywide groups. Project does not have documented support from disadvantaged populations. Zero points for a project that was neither developed out of a community-based planning process nor has other forms of demonstrated community support.										
<b>Leveraging:</b> Highest possible score is 4. Project demonstrates actual or potential leveraging of Prop L funds, as indicated in the funding plan. Factors to consider include the status of other fund sources and the likely competitiveness for securing non-Prop L funds from discretionary sources.										
<b>Safety:</b> Highest possible score is 4. Project improves safety for passengers, operators and/or employees. Projects that address a documented safety issue should score more highly. Points are based on the safety information presented in the Project Information Form.										
<b>Need (Asset Useful Life):</b> Highest possible score is 4. Project replaces asset at end of useful life or overhauls/modernizes mid-life to either extend useful life or so that assets operate safely and reliably through the end of their useful life.										
<b>Improves Efficiency of Transit Operations:</b> Highest possible score is 4. Project supports reliable transportation services and improved efficiency.										

**2023 Prop L 5-Year Project List (FY 2023/24 - FY 2027/28)**  
**07- BART Transit Maintenance, Rehabilitation, and Replacement**  
**Programming Year**

Pending October 24, 2023 Board Meeting

Agency	Project Name	Phase	Fiscal Year of Allocation					Total
			2023/24	2024/25	2025/26	2026/27	2027/28	
BART	BART Transit Enhancements, Next Generation Fare Gates	Construction	\$12,525,000					\$12,525,000
<b>Funds Requested in 2023 5YPP</b>			\$12,525,000	\$0	\$0	\$0	\$0	\$12,525,000
<b>Cumulative Remaining Programming Capacity</b>			(\$9,213,394)	(\$9,213,394)	(\$9,213,394)	(\$9,213,394)	(\$9,213,394)	(\$9,213,394)

**2023 Prop L 5-Year Project List (FY 2023/24 - FY 2027/28)**  
**07- BART Transit Maintenance, Rehabilitation, and Replacement**  
**Cash Flow (Maximum Annual Reimbursement)**

Pending October 24, 2023 Board Meeting

Project Name	Phase	Fiscal Year of Reimbursement					Total
		2023/24	2024/25	2025/26	2026/27	2027/28	
BART Transit Enhancements, Next Generation Fare Gates	Construction	\$6,263,000	\$6,262,000				\$12,525,000
<b>Cash Flow Requested in 2023 5YPP</b>		\$6,263,000	\$6,262,000	\$0	\$0	\$0	\$12,525,000
<b>Cash Flow in 2023 Draft Strategic Plan Baseline</b>		\$367,956	\$735,913	\$735,913	\$735,913	\$735,913	\$3,311,606
<b>Cumulative Remaining Cash Flow Capacity</b>		(\$5,895,044)	(\$11,421,131)	(\$10,685,219)	(\$9,949,306)	(\$9,213,394)	(\$9,213,394)

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### Anticipated Leveraging

The table below compares Prop L Expenditure Plan assumptions with anticipated leveraging for the recommended projects based on the Project Information Forms. At time of allocation, Transportation Authority staff will again compare the actual leveraging to the expected leveraging.

Table 2. Prop L Leveraging: Expected vs. Proposed for Fiscal Years 2023/24 - 2027/28

PROGRAM	EXPECTED LEVERAGING IN EP (NON-PROP L FUNDS)	ANTICIPATED LEVERAGING (NON-PROP L FUNDS)
BART Maintenance: Next Generation Fare Gates	93.5%	86%

Anticipated leveraging is close to the level expected in the Prop L Expenditure Plan, with \$77.5 million from non-Prop L sources such as Federal Transit Formula funds, BART funds, and contributions from other BART counties contributing to the Next Generation Fare Gates project.

**Prop L Sales Tax Program  
Project Information Form (PIF) Template**

Project Name and Sponsor			
<b>Project Name:</b>	Next Generation Fare Gates		
<b>Implementing Agency:</b>			
Prop L Expenditure Plan Information			
<b>Prop L Program:</b>	07- BART Transit Maintenance, Rehabilitation, and Replacement		
<b>Prop L Sub-Program (if applicable):</b>			
<b>Other Prop L Programs (if applicable):</b>			
Project Information			
<b>Brief Project Description for MyStreetSF (80 words max):</b>	The Next Generation Fare Gates (NGFGs) Project will upgrade fare gates at all eight stations in San Francisco. This effort is a part of a larger \$90 million capital project to replace all 715 fare gates throughout the BART system. The existing fare gates have reached the end of their useful life and have consistently been identified by BART riders and community stakeholders as a priority for replacement. The new gates will increase reliability, access, and improve ridership experience.		
<b>Project Location and Limits:</b>	The NGFGs will be installed at all eight stations in San Francisco: Embarcadero, Montgomery St., Powell St., Civic Center/UN Plaza, 16th St. Mission, 24th St. Mission, Glen Park, and Balboa Park.		
<b>Supervisory District(s):</b>	District 03, District 05, District 06, District 09		
<b>Is the project located on the 2022 Vision Zero High Injury Network ?</b>	No	<b>Is the project located in an Equity Priority Community (EPC)?</b>	Yes
<b>Which EPC(s) is the project located in?</b>	The project is located in EPCs with high levels of households with minority or low-income status, seniors, people who have limited English proficiency, single parent families, zero-vehicle households, and people with disabilities. Please see Attachment A, pg. 8, for a map of the Project's Location and Equity Priority Communities.		
<b>Detailed Scope (may attach Word document):</b> Please describe in detail the project scope, any planned community engagement, benefits, considerations for climate adaptation and resilience (if relevant), and coordination with other projects in the area (e.g. paving, Vision Zero).	Please see Attachment A, pgs. 1-6.		
<b>Attachments:</b> Please attach maps, drawings, photos of current conditions, etc. to support understanding of the project.	Please see Attachment A, pgs. 1-6.		
<b>Type of Environmental Clearance Required:</b>	Categorically Exempt		

**Prop L Sales Tax Program  
Project Information Form (PIF) Template**



<b>Coordinating Agencies:</b> Please list partner agencies and identify a staff contact at each agency.	The Project will be coordinated with other projects taking place at the stations, or near the stations, in San Francisco. BART participates in and hosts quarterly and monthly meetings with various City and County of San Francisco stakeholders where construction projects are discussed. These meetings include the BART, San Francisco Public Works, and SFMTA Quarterly Coordination Meeting, and the BARTCCSFMarket Street Monthly Meeting. The Project will also coordinate with BART led projects, including the Traction Power Substation Replacement Project, Market Street Entrance Canopy Project, Escalator Replacement Project, and the Embarcadero Platform Elevator Project. Additionally, the Project will also coordinate with MTC on the Clipper 2 integration.
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<b>Project Delivery Milestones</b>	<b>Status</b>	<b>Work</b>	<b>Start Date</b>		<b>End Date</b>	
<b>Phase</b>	<b>% Complete</b>	<b>In-house - Contracted - Both</b>	<b>Quarter</b>	<b>Fiscal Year (starts July 1)</b>	<b>Quarter</b>	<b>Fiscal Year (starts July 1)</b>
Planning/Conceptual Engineering	100%	In-house	Q3-Jan-Feb-Mar	2018/19	Q2-Oct-Nov-Dec	2021/22
Environmental Studies (PA&ED)	N/A					
Right of Way	N/A					
Design Engineering (PS&E)	N/A					
Advertise Construction			Q2-Oct-Nov-Dec	2022/23		
Start Construction (e.g. Award Contract)	0%	In-house and Contracted	Q2-Oct-Nov-Dec	2023/24		
Operations (i.e. paratransit)	N/A					
Open for Use	N/A				Q2-Oct-Nov-Dec	2026/27
Project Completion (means last eligible expenditure)	0%	Contracted			Q2-Oct-Nov-Dec	2030/31

**Notes**

Project Completion time includes warranty periods.

Prop L Sales Tax Program  
Project Information Form (PIF) Template



Project Name:	Next Generation Fare Gates									
Project Cost Estimate			Funding Source							
Phase	Cost	Prop L	Other	Source of Cost Estimate						
Planning/Conceptual Engineering	\$ 2,948,553	\$ -	\$ 2,948,553	Actual						
Environmental Studies (PA&ED)	\$ -	\$ -								
Right of Way	\$ -	\$ -								
Design Engineering (PS&E)	\$ -	\$ -								
Construction	\$ 87,051,447	\$ 12,525,000	\$ 74,526,447	BART Technical and Engineering Staff + STraffic Contract						
Operations (i.e. paratransit)	\$ -	\$ -								
Total Project Cost	\$ 90,000,000	\$ 12,525,000	\$ 77,475,000							
Percent of Total		14%	86%							
Funding Plan - All Phases - All Sources						Cash Flow for Prop L Only (i.e. Fiscal Year of Reimbursement)				
Fund Source	Prop L Program	Phase	Fund Source Status	Fiscal Year of Allocation (Programming Year)	Total Funding	2023/24	2024/25	2025/26	2026/27	2027/28
SFCTA Prop L	07- BART Transit Maintenance, Rehabilitation, and Replacement	Construction	Planned	2023/24	\$ 12,525,000	\$ 3,263,000	\$ 9,262,000	\$ -	\$ -	\$ -
FTA Formula Funds		Construction	Allocated		\$ 10,272,000	\$ -	\$ -	\$ -	\$ -	\$ -
Federal Earmark		Construction	Allocated		\$ 2,000,000	\$ -	\$ -	\$ -	\$ -	\$ -
BART Measure RR		Construction	Allocated		\$ 5,665,000	\$ -	\$ -	\$ -	\$ -	\$ -
BART Capital Allocations		Construction	Allocated		\$ 11,724,000	\$ -	\$ -	\$ -	\$ -	\$ -
ACTC Measure BB		Construction	Programmed		\$ 19,573,000	\$ -	\$ -	\$ -	\$ -	\$ -
AHSC		Construction	Programmed		\$ 5,201,000	\$ -	\$ -	\$ -	\$ -	\$ -
CCTA Measure J		Construction	Programmed		\$ 3,500,000	\$ -	\$ -	\$ -	\$ -	\$ -
FY24 CA State Budget Earmark		Construction	Programmed		\$ 1,000,000	\$ -	\$ -	\$ -	\$ -	\$ -
SFPUC Easement Sales Proceeds		Construction	Planned		\$ 306,000	\$ -	\$ -	\$ -	\$ -	\$ -
South Hayward JPA Dissolution Settlement Proceeds		Construction	Planned		\$ 750,000	\$ -	\$ -	\$ -	\$ -	\$ -
STIP Funds (CCTA)		Construction	Programmed		\$ 9,500,000	\$ -	\$ -	\$ -	\$ -	\$ -
VTa Funding		Construction	Programmed		\$ 5,035,000	\$ -	\$ -	\$ -	\$ -	\$ -
FTA Formula Funds		Planning/Conceptual Engineering	Allocated		\$ 2,949,000	\$ -	\$ -	\$ -	\$ -	\$ -
Total By Fiscal Year					\$ 90,000,000	\$ 3,263,000	\$ 9,262,000	\$ -	\$ -	\$ -
Notes										
BART intends to seek concurrent allocation of Prop L funds and approval of the BART Maintenance 5YPP.										



**Prop L Sales Tax Program  
Project Information Form (PIF) Template**



<b>Prop L Supplemental Information</b> Please fill out each question listed below (rows 2-8) for all projects.	
<b>Project Name</b>	Next Generation Fare Gates
<b>Relative Level of Need or Urgency (time sensitive)</b>	The Project is time sensitive. The Project needs to proceed in the proposed timeframe to enable coordination for the installation of new gates in San Francisco.
<b>Prior Community Engagement/Level and Diversity of Community Support (may attach Word document):</b>	Please see Attachment A, pgs. 6-7.
<b>Benefits to Disadvantaged Populations and Equity Priority Communities</b>	Please see Attachment A, pg. 8.
<b>Compatability with Land Use, Design Standards, and Planned Growth</b>	Yes
<b><a href="#">San Francisco Transportation Plan Alignment (SFTP)</a></b>	Environmental Sustainability
	See Attachment A.
The next section includes criteria that are specific to each Expenditure Plan program. The questions that are required to be filled out for each program will auto-populate once the Prop L program is selected on the Scope & Schedule tab.	
<b>07- BART Transit Maintenance, Rehabilitation, and Replacement</b>	
<b>Safety</b>	The current gates have reached their end of their useful life and break down often. The NGFGs will be designed to provide safe access to the system for everyone, with increased attention to address the needs of people with mobility limitations, using improved detection technology to ensure they properly open and close and premature closing is reduced. Accessible NGFGs will meet American with Disabilities Act requirements. The Project will also help to improve infrastructure condition as the work directly assists to maintain the condition of BART's assets in a state of good repair. BART has chosen a vendor, STraffic, with extensive experience with fare gate design and installation. The vendor has experience with TR4 reader systems, modular design and readily available industrial components. The vendor has also worked extensively with ADA community to obtain input to modify gates installed across the world. Working with STraffic, BART will be able to enhance functionality of new gates, ensuring they are safe for all patrons, and to maintain and upgrade parts in the gates over the next 20-25 years to ensure they are reliable.
<b>Need (Asset Useful Life)</b>	The current fare gates have reached the end of their useful life. The NGFGs project will replace current gates at all stations in San Francisco.
<b>Improves Efficiency of Transit Operations</b>	Modern technology on the NGFGs will shorten the transfer time between the Muni and BART system. The NGFGs will also have upgraded features including shatter proof barriers and heavy-duty panels for better protection for internal components. These features will result in higher reliability and will minimize the frequency of maintenance.



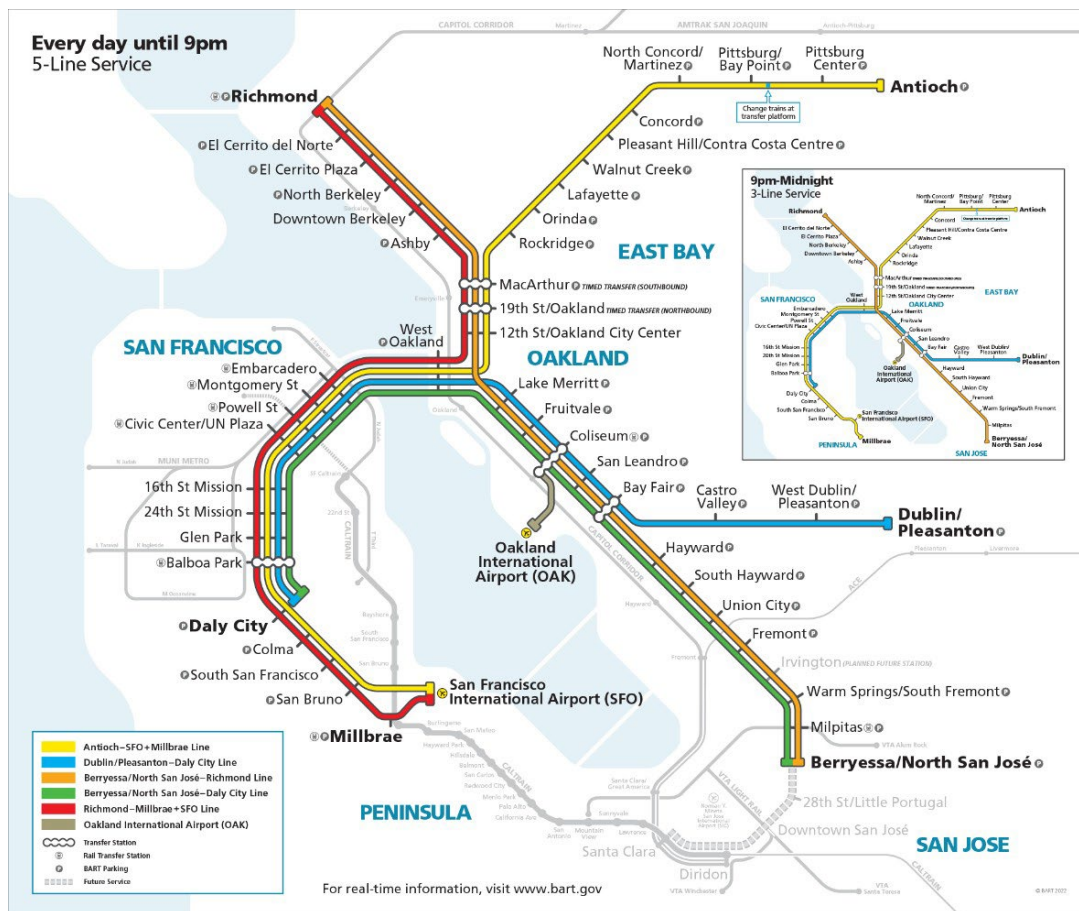
# Next Generation Fare Gates Attachment A



## Detailed Scope

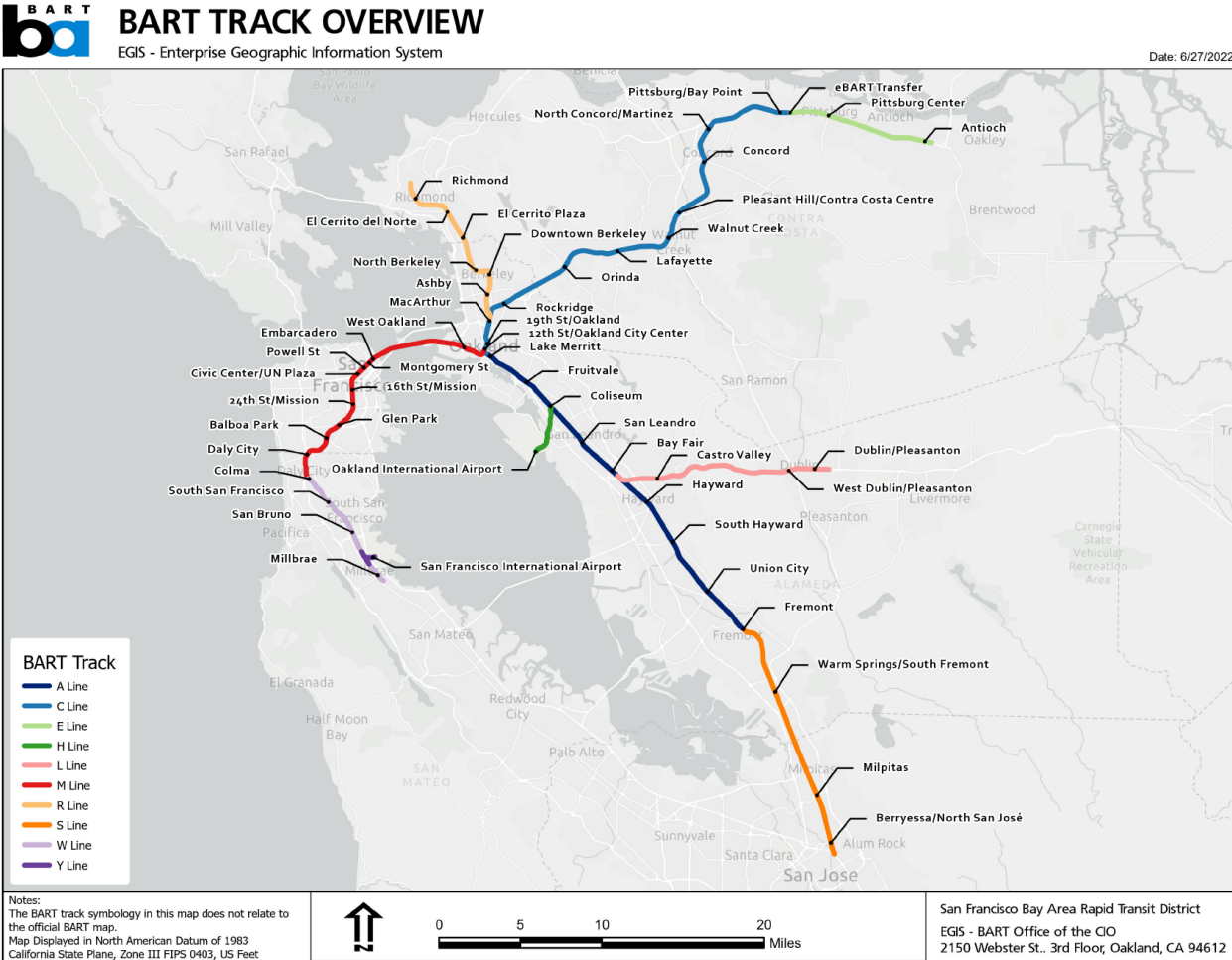
The San Francisco Bay Area Rapid Transit District (BART) requests to program \$12,500,000 of Proposition L (Prop L) funds through the 5-Year Prioritization Process (SYPP) for the Next Generation Fare Gates (NGFGs) Project. The NGFGs Project is a BART District system-wide \$90 million capital project to replace all 715 fare gates. BART is a heavy-rail public transit system that connects the San Francisco Peninsula with communities in the East Bay and South Bay. BART service currently extends as far as Millbrae, Richmond, Antioch, Dublin/Pleasanton, and Berryessa/North San José, see figure 1. BART operates in five counties (San Francisco, San Mateo, Alameda, Contra Costa, and Santa Clara) with 131 miles of track and 50 stations. BART's ridership exceeded 420,000 trips per day before the COVID-19 pandemic. During the pandemic, BART experienced unprecedented ridership pattern changes. The average daily trip count for fiscal year 2022 to 2023 was 149,433. BART anticipates ridership to increase in the next few years as the Bay Area recovers from pandemic related impact. The NGFGs Project will ensure BART continues to provide reliable transportation for Bay Area residents and visitors to reach work locations, shopping centers, tourist attractions, entertainment venues, universities, and other destinations.

Figure 1, BART System Service Map 2023



BART recognizes that existing fare gates, system-wide, have reached the end of their useful life and have consistently been identified by BART riders and community stakeholders as a priority for replacement, especially as BART continues efforts to modernize stations. New state-of-the-art NGFGs will reduce maintenance needs, cutting both costs and system downtime, and improving service to transit riders. This Project includes fare gates at the San Francisco stations along BART’s M Line. The Project work will take place at eight stations: Embarcadero, Montgomery St., Powell St., Civic Center/UN Plaza, 16<sup>th</sup> St. Mission, 24<sup>th</sup> St. Mission, Glen Park, Balboa Park. These stations rank high in station activity (entries + exits), see figure 2 for information on BART track lines and table 1 for ridership activity details.

Figure 2, BART Track Lines Overview



Average Weekday Station Activity (activity = entries + exists)		
Station	June 2019	June 2023
Embarcadero	93,100	30,900
Montgomery Street	89,300	25,700
Powell Street	55,400	22,900
Civic Center / UN Plaza	49,200	17,200
16 <sup>th</sup> St. Mission	26,500	10,900
24 <sup>th</sup> St. Mission	24,600	10,300
Glen Park	15,000	6,100
Balboa Park	20,200	7,100

Table 1, Average Weekday Station Activity

The Project's scope of work includes modernization of all 152 fare gates, based on number of aisles, at the eight listed stations. The current fare gates have reached their end of useful life, as they are more than twenty years old, outdated, break down often, and require continued maintenance. In addition, spare parts for current fare gates are no longer in production. Current fare gates require recurrent maintenance to remain reliable and operational. BART's Maintenance and Engineering Department ensures fare gates are in optimum condition with its preventive maintenance practices. Currently, the fare gates undergo preventive maintenance every ten weeks. Corrective maintenance is also conducted when fare gates are underperforming. In order to minimize corrective maintenance, BART has been dedicating \$120,000 annually to preventive maintenance tasks. However, BART regularly deploys technicians to address corrective maintenance tasks and ensure fare gates perform at their optimum capacity due to issues with the outdated fare gates. BART receives an average of 2,000 annual requests/tickets to address fare gate performance challenges systemwide. In San Francisco, annual corrective maintenance is most often required at Powell Street, described as M30 below, see table 2.

San Francisco Stations Annual Corrective Maintenance				
	2019	2020	2021	2022
<b>M16: Embarcadero</b>	10	8	8	3
<b>M20: Montgomery</b>	9	6	1	0
<b>M30: Powell</b>	13	1	8	13
<b>M40: Civic Center</b>	4	0	4	5
<b>M50: 16<sup>th</sup> St.</b>	3	0	0	0
<b>M60: 24<sup>th</sup> St.</b>	2	1	2	0
<b>M70: Glen Park</b>	1	0	1	0
<b>M80: Balboa Park</b>	1	1	0	0

Table 2, San Francisco Annual Corrective Maintenance

In recent years, BART has been making investments to identify and develop the best way to improve current fare gates. A variety of designs were considered and rated based on reliability, maintainability, throughput capacity, effectiveness, accessibility, and ability to easily integrate with Clipper®, the region's all-in-one transit fare payment card. In 2019, the BART Board of Directors voted unanimously to adopt a swing gate style design as the standard for new gates. The new design will offer BART more control over the replacement schedule, reducing engineering and deployment time. In total, design innovations are estimated to reduce the cost of the final design and installation from \$150 to \$90 million. See figure 3 for a representation of two test designs deployed at the Richmond station.

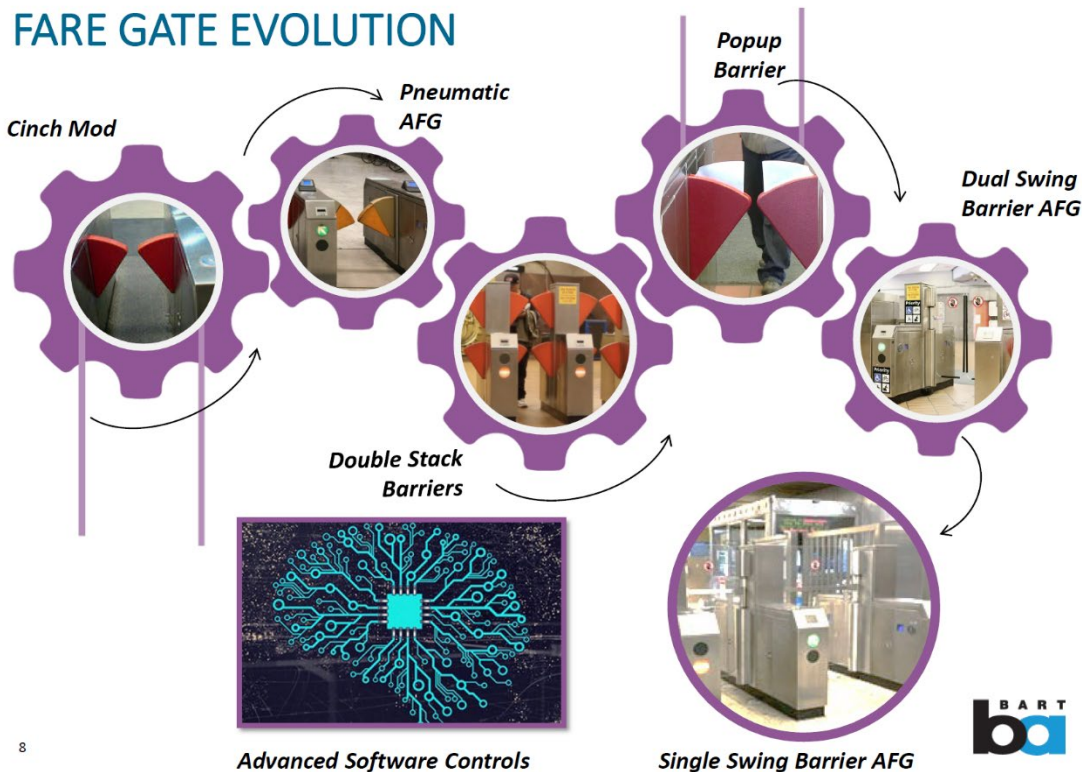
Figure 3, Double Stack Barrier and Dual Swing Barrier



BART's Fare Collection Engineering Department has developed innovative enhancements, retrofitted existing retractable fare gates to swing style fare gates, and implemented prototypes at various locations throughout the transit system, including the Richmond, Coliseum, Concord, Bay Fair, Montgomery Street, Balboa Park, Embarcadero, and El Cerrito Plaza stations. For each installation, BART made improvements based on information gathered from the previous installation. These prototyped fare gates provided BART vital data for the Fare Collection Engineering Department to develop specific requirements and criteria for the final NGFGs. The design of multiple prototypes is shown in the Fare Gate Evolution, figure 4.



Figure 4, Fare Gate Evolution

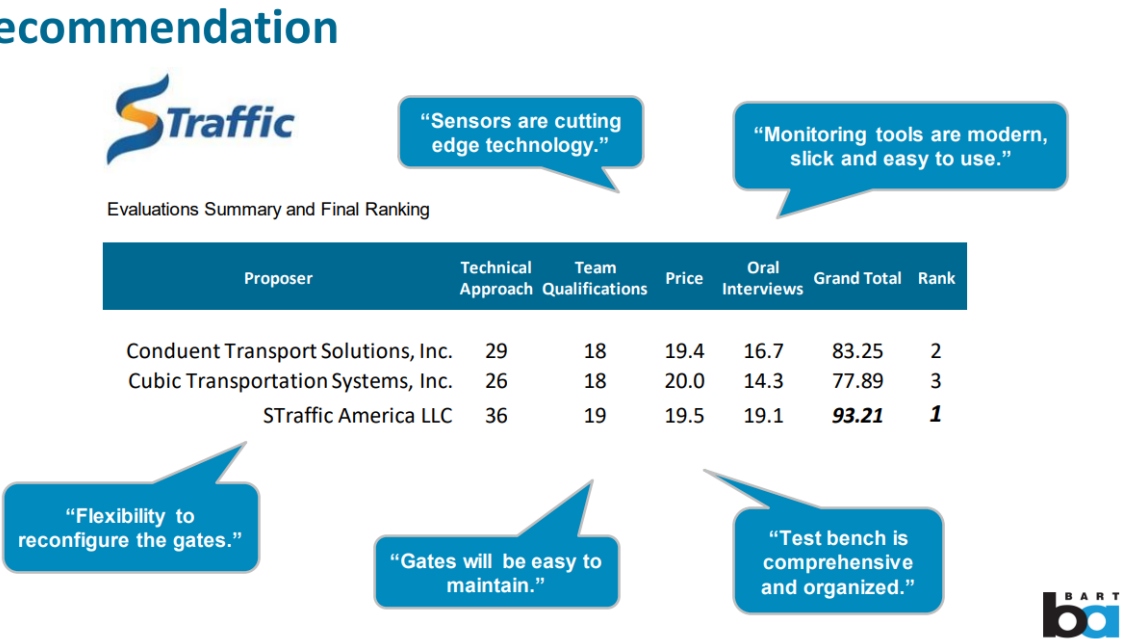


With extensive knowledge of possible solutions, BART looked forward to launch and implement new technology systemwide. In September of 2020, BART released a Request for Expressions of Interest (RFEI) for companies to assist to develop an innovative design for the new gates. The RFEI was an opportunity for interested stakeholders to share information, provide input, and discuss with BART potential alternatives, feasibility, and challenges. The RFEI provided details on BART’s design ideas and implementation approach. Information gathered through the RFEI process provided BART information to assess alternative options and opportunities for improvements. With this knowledge, BART issued a Request for Proposals (RFP) in May of 2022 and December of 2022.

The final NGFGs, selected via the RFP, will be the vendor’s design meeting BART’s required technical specifications with minimal customization. The gates will be swing style, and the main actuation of the gates will change from pneumatic to electric. The electric style requires lower maintenance frequency and therefore are more cost effective. The new NGFGs will have improved sensors to optimally open and close the gate able to detect patrons, wheelchairs, children, luggage and bikes accurately. The installation/construction phase of the NGFGs will include: Systems Integration and Engineering, including back-office system integration, interfaces, and Clipper integration; Startup and Launch, including O&M training documentation, engineering training, installation training, and test rollout; Program Management, including mobilization, demobilization, general conditions, and field office.

From January to March of 2023, BART reviewed proposals, interviewed responsive vendors, and chose STraffic to implement the project. The vendor selection was conducted by an evaluation panel comprised of nine BART staff from various departments. The vendors were evaluated on four categories: technical approach, qualifications of the firm and proposer’s team, price, and oral interview. See figure 5 below for the final scores.

Figure 5, Vendor Evaluation Summary



The contract with STraffic is for procurement of faregates to replace the existing faregates systemwide. STraffic and or another vendor may also be contracted for installation. This would be a separate future contract or work order.

Prior Community Engagement/Level and Diversity of Community Support

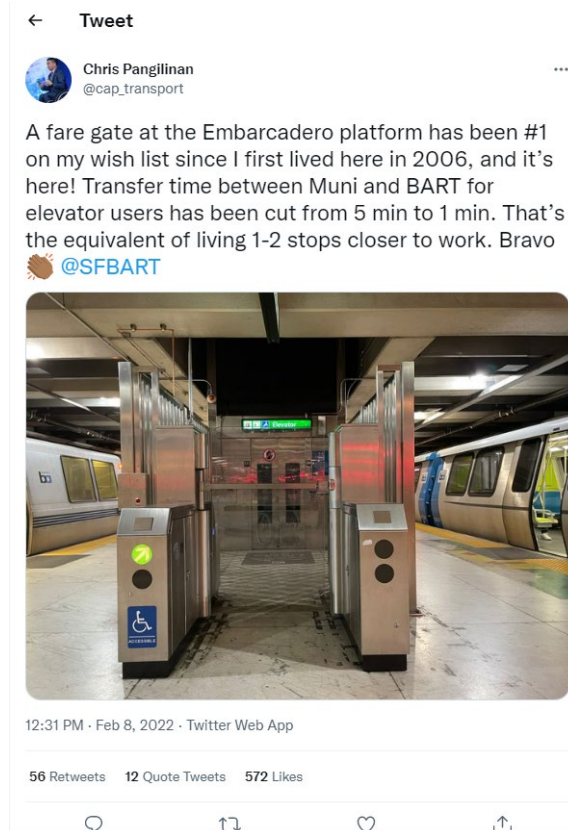
BART has engaged with community members and obtained input and support for prototype fare gates through various forums:

- In July of 2020, the NGFGs Project team conducted a presentation for BART's Accessibility Task Force (BATF) to provide an overview, and obtain feedback, regarding an accessible fare gate prototype deployed at BART's Richmond Station. The BATF advises the BART Board of Directors and staff on disability-related issues and advocates on behalf of people with disabilities and seniors to make the BART system accessible to and useable by people regardless of disability or age. BATF members provided very positive feedback regarding the new accessible fare gate. Mr. Roland Wong, an BATF member, stated that his "experience was positive and [he] had no problems entering and exiting the swing gates." He also stated that the "faregates did not make loud noises and were quiet."
- In March of 2022, the NGFGs Project team presented an update to the BART Board of Directors. The BART Board is comprised of nine elected officials representing the BART Districts: Contra Costa County, Alameda County, and City and County of San Francisco. Each of the nine BART Board members represents a constituency with wide-ranging needs, as each county is composed of different populations, and access and use of transit varies significantly by city within each county. Therefore,



BART Board Directors' input is representative of different segments of the San Francisco Bay Area community needs.

- In February of 2022, Chris Pangilinan, Vice President of Paratransit at the Metropolitan Transportation Authority, New York, twitted the following about one of the NGFGs installed at the Embarcadero Station "A fare gate at the Embarcadero platform has been #1 on my wish list since I first lived here in 2006, and it's here! Transfer time between Muni and BART for elevator users has been cut from 5 min to 1 min."



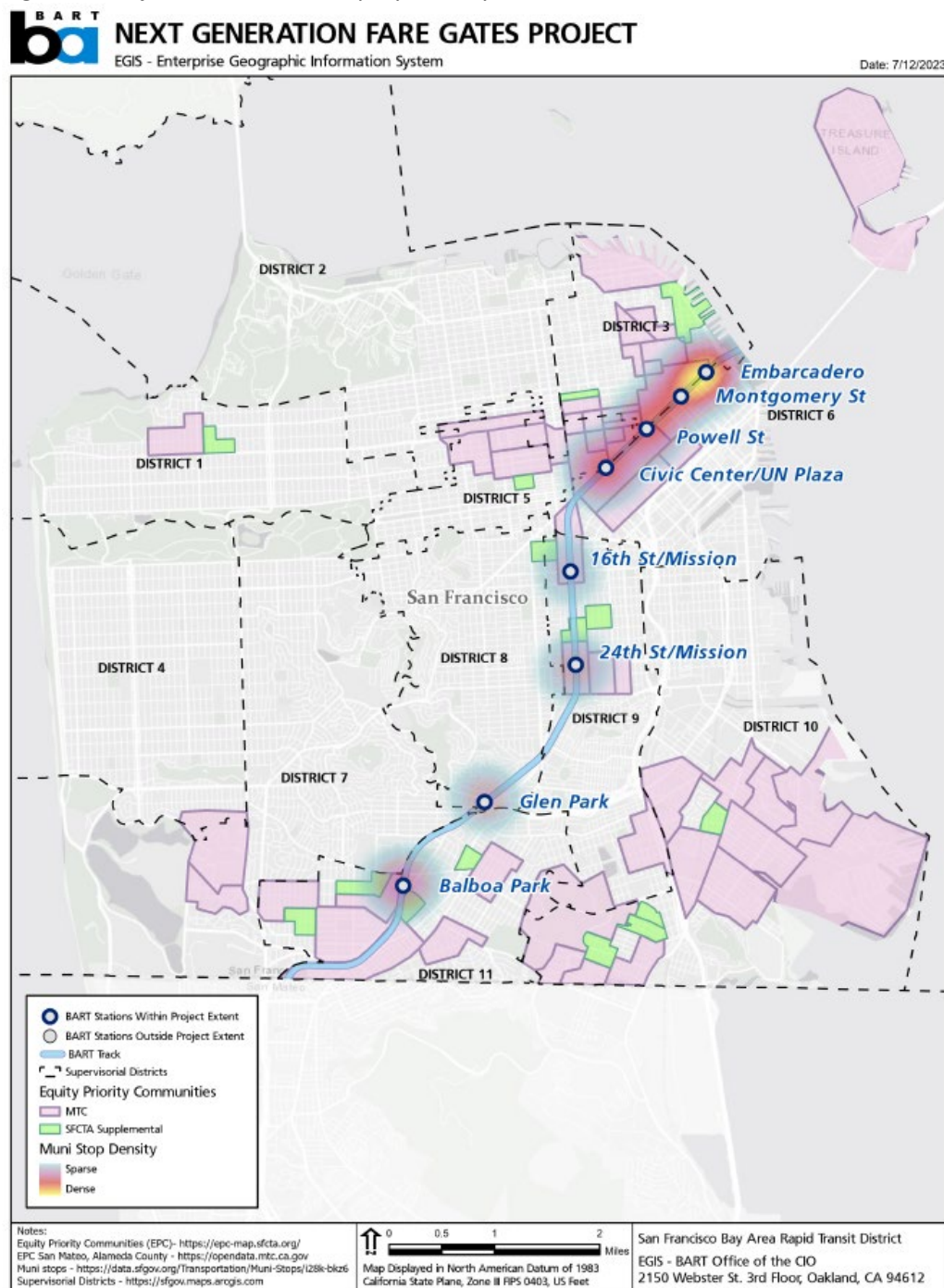
- In April of 2023, the NGFGs Project team provided an update to the BART Board on the vendor selection. A copy of the presentation is included in the programming packet, see item named "April 2023 Presentation to BART Board."
- In June of 2023, the NGFGs Project team provided an update to the BART Accessible Task Force. A copy of the DRAFT minutes are included in the programming packet, please do not distribute. See item named "BATF 06-22-2023 Draft Minutes."

### Benefits to Disadvantaged Populations and Equity Priority Communities

The Project will take place at all stations in San Francisco. These stations serve diverse populations, including historically underserved communities and Equity Priority Communities. The Project's will take place at various locations with significant densities of historically underserved communities, including ethnic and racial minorities, people who are of low income, people with disabilities, elderly, people whose household does not own a vehicle, single parent families, and people who are rent-burdened. The Project Location Map included below provides a

visual representation of combined MTC and San Francisco County Transportation Authority EPC measures, see figure 6.

Figure 6, Project Location and Equity Priority Communities



## San Francisco Transportation Plan Alignment (SFTP)

SFTP Goal	CCP Alignment
<b>Equity</b>	<ul style="list-style-type: none"> <li>• The existing BART system covers large portions of the Bay Area and bisects several communities, including those with designated minority and low-income populations. No impacts from the installation or operation of NGFGs are anticipated; therefore, no disproportionately high and adverse effects are anticipated for any surrounding communities, including any Title VI/EJ communities.</li> <li>• BART, as a recipient of federal funds, is required by the FTA to comply with Title VI of the Civil Rights Act of 1964 and its amendments (Act). Title VI of the Civil Rights Act of 1964 requires that no person in the United States, on the grounds of race, color, or national origin be excluded from, be denied the benefits of, or be subjected to discrimination, under any program or activity receiving federal financial assistance. Presidential Executive Order 12898 “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations” addresses environmental justice (EJ) in minority and low-income populations. Presidential Executive Order 13166 “Improving Access to Services for Persons with Limited English Proficiency” addresses services to those individuals with Limited English Proficiency (LEP). FTA Circular 4702.1B, dated October 1, 2012, titled Title VI Requirements and Guidelines for Federal Transit Administration Recipients (Title VI Circular) and FTA Circular 4703.1, dated August 15, 2012, titled Environmental Justice Policy Guidance for Federal Transit Administration Recipients (EJ Circular), require that federal funding recipients such as BART review its transportation decisions to ensure equity in the transportation decision making process and to ensure that decisions are not made on the basis of race, color, national origin, or socioeconomic status. BART’s Office of Civil Rights monitors BART’s compliance to these mandates, including monitoring the NGFGs Project.</li> <li>• Lastly, for the NGFGs Project BART has chosen a vendor for the Project with a diverse team, including Disadvantaged Business Enterprises (DBE). The team includes 1) e<sup>2</sup> Engineering, a DBE certified training firm specializing in Intelligent Transportation Systems; 2) VST Engineering, a DBE certified firm with 30 years of experience delivering capital projects from conceptual design through implementation; and 3) Pride Resource Partners, an LGBT-owned and operated DBE specializing in contract compliance, scheduling, and supervisory oversight.</li> </ul>
<b>Environmental Sustainability</b>	<ul style="list-style-type: none"> <li>• As part of its mission, BART is committed to integrating climate adaptation and resiliency practices into daily operations and future transit investments. BART’s Sustainability Policy (adopted in 2017) frames overarching resilience actions and initiatives, which are further detailed in BART’s 10-year Sustainability Action Plan.</li> <li>• The NGFGs have no physical features that will lead to environmental impacts. The NGFGs are Categorical Exempt.</li> </ul>

<b>Accountability &amp; Engagement</b>	<ul style="list-style-type: none"> <li>• BART has been conducting extensive outreach and engagement to diverse stakeholders as discussed in the section named “Prior Community Engagement.”</li> <li>• Prior to submitting their proposal, STraffic conducted extensive outreach to local Bay Area community groups. As a result, STraffic has committed to provide 2000 hours of new technical internship to Bay Area community-based organization. Hands-on STEM (science, technology, engineering and mathematics) internships provide students with the opportunity to apply theoretical knowledge gained in the classroom to real-world projects. This hands-on experience allows them to develop practical skills and a deeper understanding of how technical concepts are applied. It also gives them the opportunity to work with cutting-edge technologies, tools, and equipment, which can be valuable in their future careers.</li> <li>• The Project aligns with MTC’s Equity Platform, the Regional Active Transportation Plan, and the Blue-Ribbon Transit Transformation Action Plan, as the Project’s work will: <ul style="list-style-type: none"> <li>○ Modernize fare gates to preserve and improve access for all customers, including people with disabilities, seniors, cyclists, families with strollers, and travelers with luggage.</li> <li>○ Support and expand ridership as modernized fare gates may attract more riders, as customers may feel more comfortable with accessing the transit system for their transportation needs.</li> <li>○ Support transit ridership for customers of diverse backgrounds. There are several housing developments near the San Francisco stations, and many of them are occupied by people who are of low income, people with disabilities, and seniors. BART serves as the primary mode of transportation for many of these community members given the location of the stations. BART service is also convenient to transfer to other modes of transportation as is Muni service, see Project Location and Equity Priority Communities Map, which includes Muni stop density near the stations.</li> </ul> </li> </ul>
<b>Economic Vitality</b>	<ul style="list-style-type: none"> <li>• Ranked by population, the Bay Area is the fourth largest metropolitan area in the United States. The nine-county region is home to more than 7.8 million people and 3.9 million jobs. The Bay Area’s economy continues to grow, despite setback from the COVID-19 pandemic, driven in part by the technology sector that is vital to growing the nation’s overall economy. By 2050, the region expects over ten million residents and five million jobs to be located here.<sup>1</sup> As one of the Bay Area’s largest transit network, BART currently operates and maintains 50 stations and 131 miles of revenue track, serving over 149,000 passengers every weekday in the counties of Alameda, Contra Costa, San Francisco, San Mateo, and Santa Clara. The NGFGs Project will support expected economic growth and vitality in</li> </ul>

<sup>1</sup> Plan Bay Area 2050, Plan Bay Area 2050 Final Plan

	<p>the Bay Area. The Project will help to improve access and experience for community members to travel to employment locations throughout San Francisco and the greater Bay Area. The Project is also located in areas with projected greater densities, Priority Development Areas, and Transit-Rich Areas.</p>
<b>Safety and Livability</b>	<ul style="list-style-type: none"> <li>• The current gates have reached their end of their useful life and break down often. The NGFGs will be designed to provide safe access to the system for everyone, with increased attention to address the needs of people with mobility limitations, using improved detection technology to ensure they properly open and close and premature closing is reduced. Accessible NGFGs will meet American with Disabilities Act requirements. The Project will also help to improve infrastructure condition as the work directly assists to maintain the condition of BART's assets in a state of good repair.</li> <li>• BART has chosen a vendor, STraffic, with extensive experience with fare gate design and installation. The vendor has experience with TR4 reader systems, modular design and readily available industrial components. The vendor has also worked extensively with ADA community. STraffic will be incorporating lessons learned to ensure the final fare gate design is equipped with top and side mounted readers, sensor technology for safe access of persons and service animals, and aisle lighting, messaging, and color-coding options. Working with STraffic, BART will be able to enhance functionality of new gates, ensuring they are safe for all patrons, and to maintain and upgrade parts in the gates over the next 20-25 years to ensure they are reliable.</li> </ul>