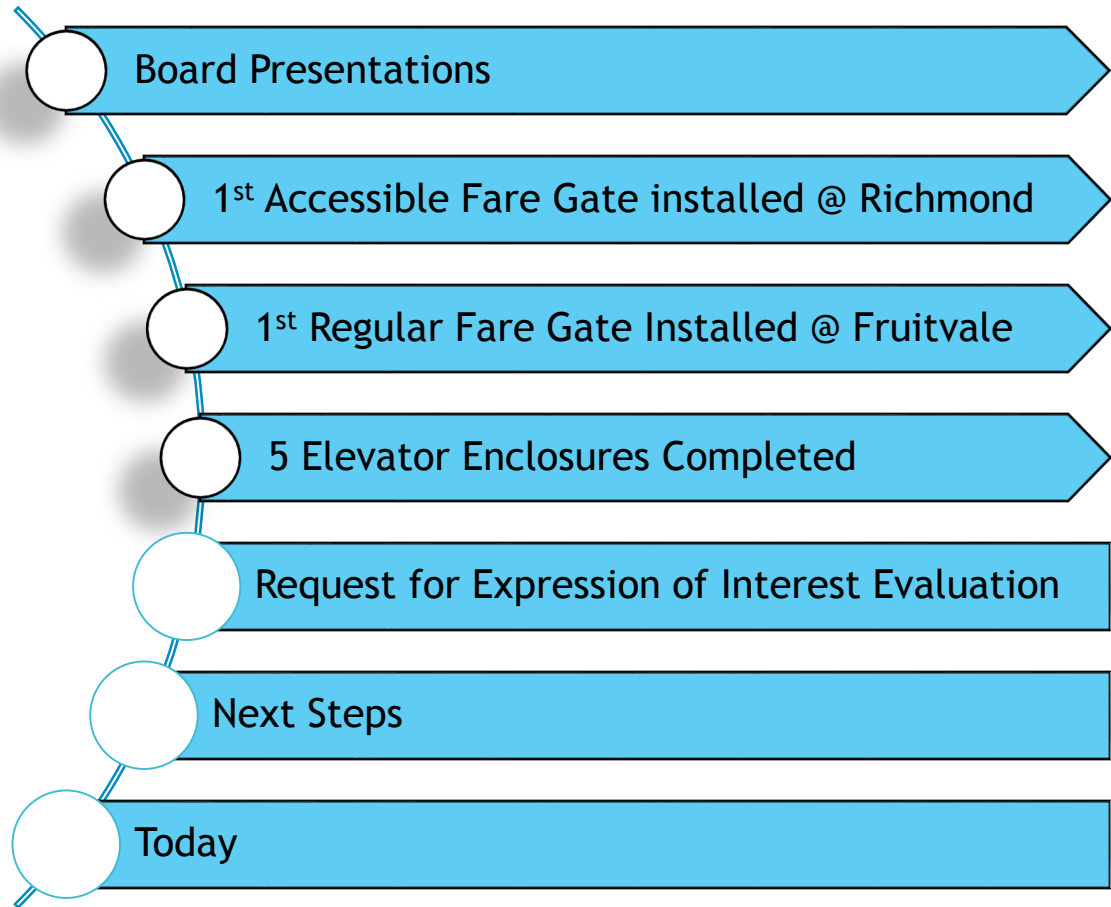


Next Generation Fare Gates Update



We're Back



Today



- On Schedule
- On Budget
- Secured Funding on Target
- Enhancements to original Design
- Evaluated the Request for Expression of Interest (RFEI) Responses
- Adopted the Hybrid Approach
 - BART Design +
 - RFP for Manufacturing +
 - RFP for Vendor of Off the Shelf Gates
 - *All Gates Installed by BART Forces*

BART Designed Gate Path

AFG Pilot/Data Analysis

RFG Pilot/Data Analysis

Array Pilot/Data Analysis

Finalize
Design

Develop RFP
to
Manufacture
Components

Build
Gates
By
BART
Forces

Deploy
Install

Vendor Supplied Off the Shelf Gate Path

Develop Best Value
RFP for Off the
Shelf Gate

Evaluate Submittals

1. Deter Fare Evasion
2. Maintainability
3. Aesthetics

Procure
Off the
Shelf
Gates






Deploy/Install

Hybrid Approach – Parallel Paths

BART Designed Gate Update

Fare Gate Project Goals

- Deter Fare Evasion
- Reduce Maintenance Costs
- Aesthetics

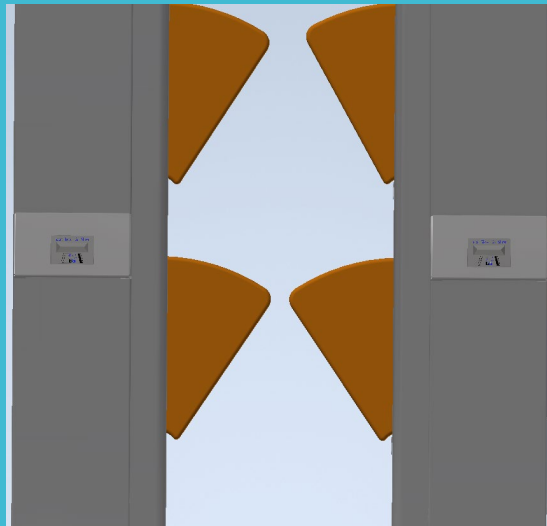
1	2	3	4	5
JUMP OVER	CRAWL UNDER	CLIMB OVER	FORCE THROUGH	TAIL GATING/ PIGGY BACKING
				

Prior Efforts

Existing Gates - Air Cinch Modification

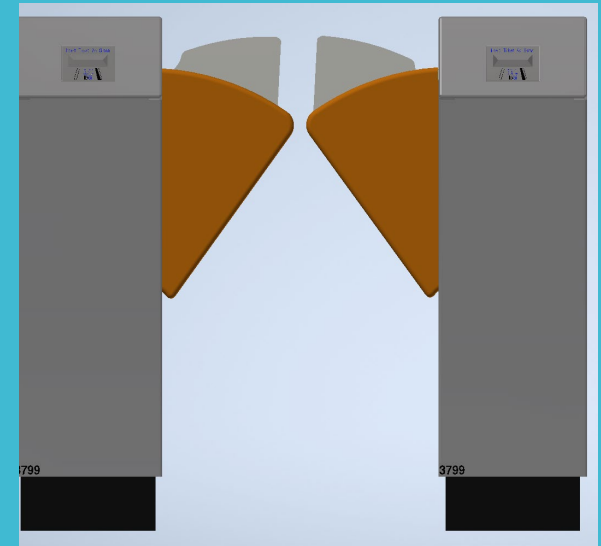
- Once Gate Closes - 80 lbs. of Pressure Applied the Leaf
- 29 Stations Converted

Double Decker

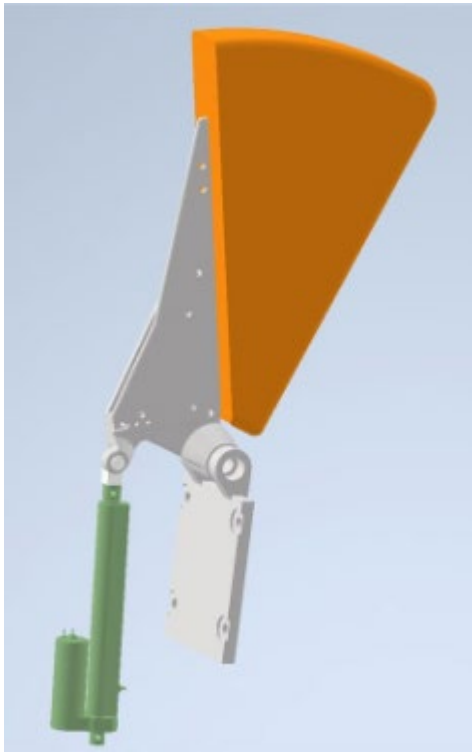


Regular Fare Gates Richmond

Pop-Up Barrier



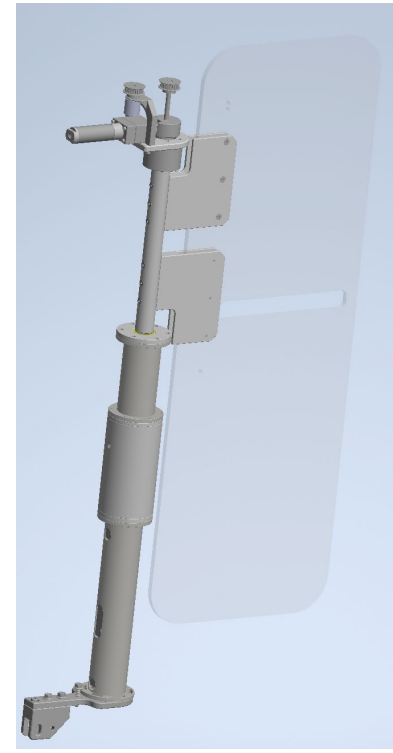
Removed from the Field



Electric Actuator Assembly



New Gate - Richmond



Pneumatic Swing Gate Assembly

Swing Barrier Accessible Gate v 1.0

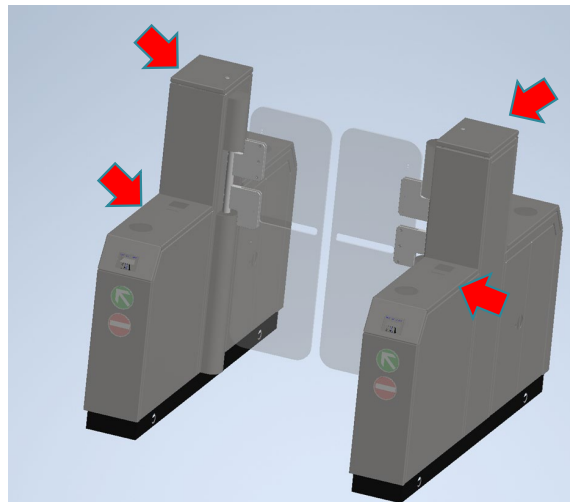
Swing Barrier V 1.0

Benefits:

- Favorable Customer Response
- Reduced Maintenance

Challenges Post Implementation:

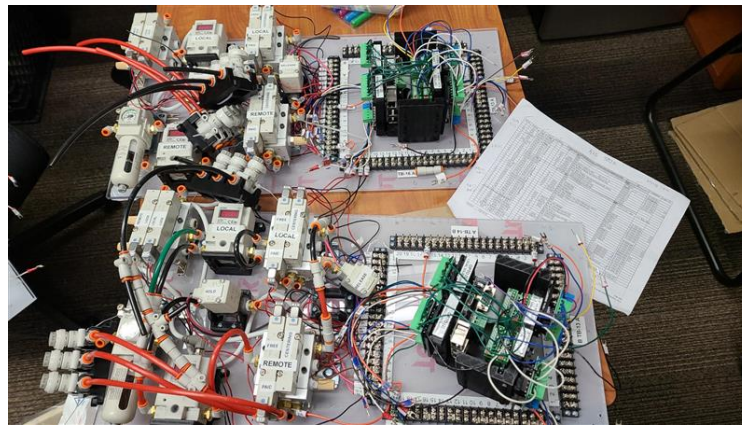
- Leaf Alignment
- Wear of Bolt Lock
- Flat Surfaces still easy to use for Climbing



Swing Barrier Enhancements Post Field Test

Electrical Innovations

Off-The-Shelf Fare Gate Controller Board - Pneumatic Control Assembly



*Prototype -
Fare Gate Controller*



New Fare Gate Controller

Benefits:

- Reduced Implementation Costs
- Reduced Maintenance Costs
- Easy to Troubleshoot for Maintenance

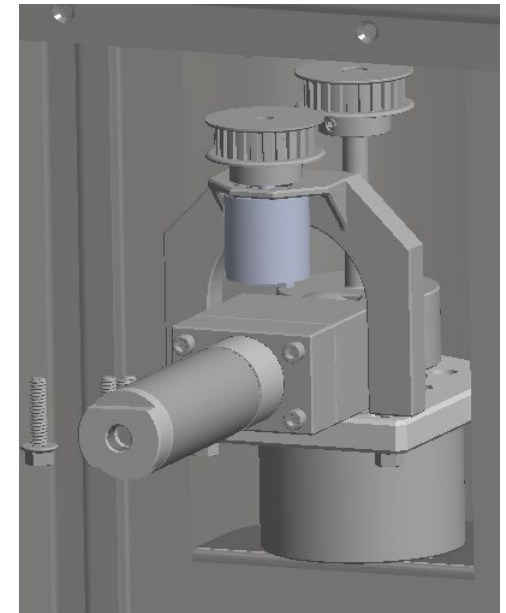
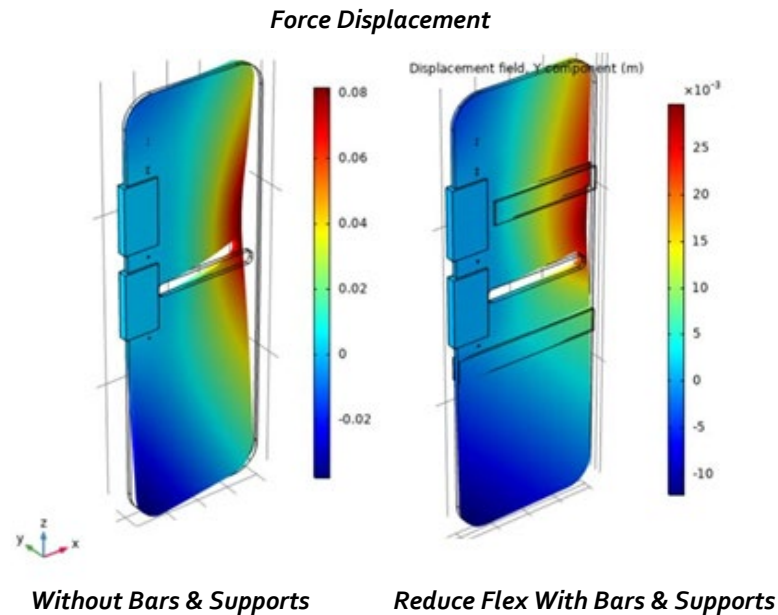
Mechanical Innovation

Design Improvements:

- Improved Bolt Mechanism
- Steel Alloy Bolt
- Leaf Hardening – Aluminum Bars & Supports
- Reduce Crawl Space under Leaves to 8"

Benefits:

- Reduced Wear on Parts
- Reduced Maintenance Tickets



Bolt

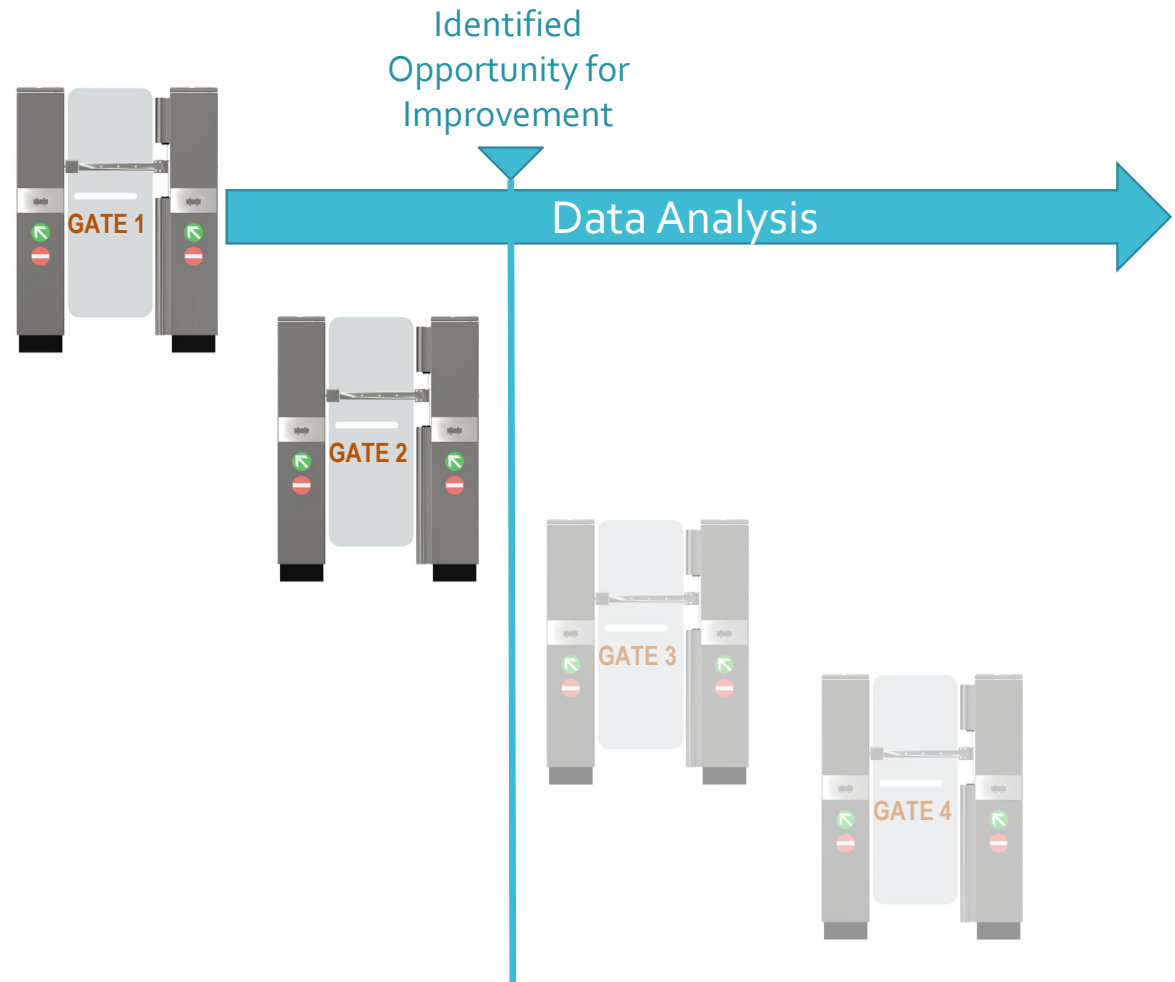
Software Improvements Smart Gate

Benefits:

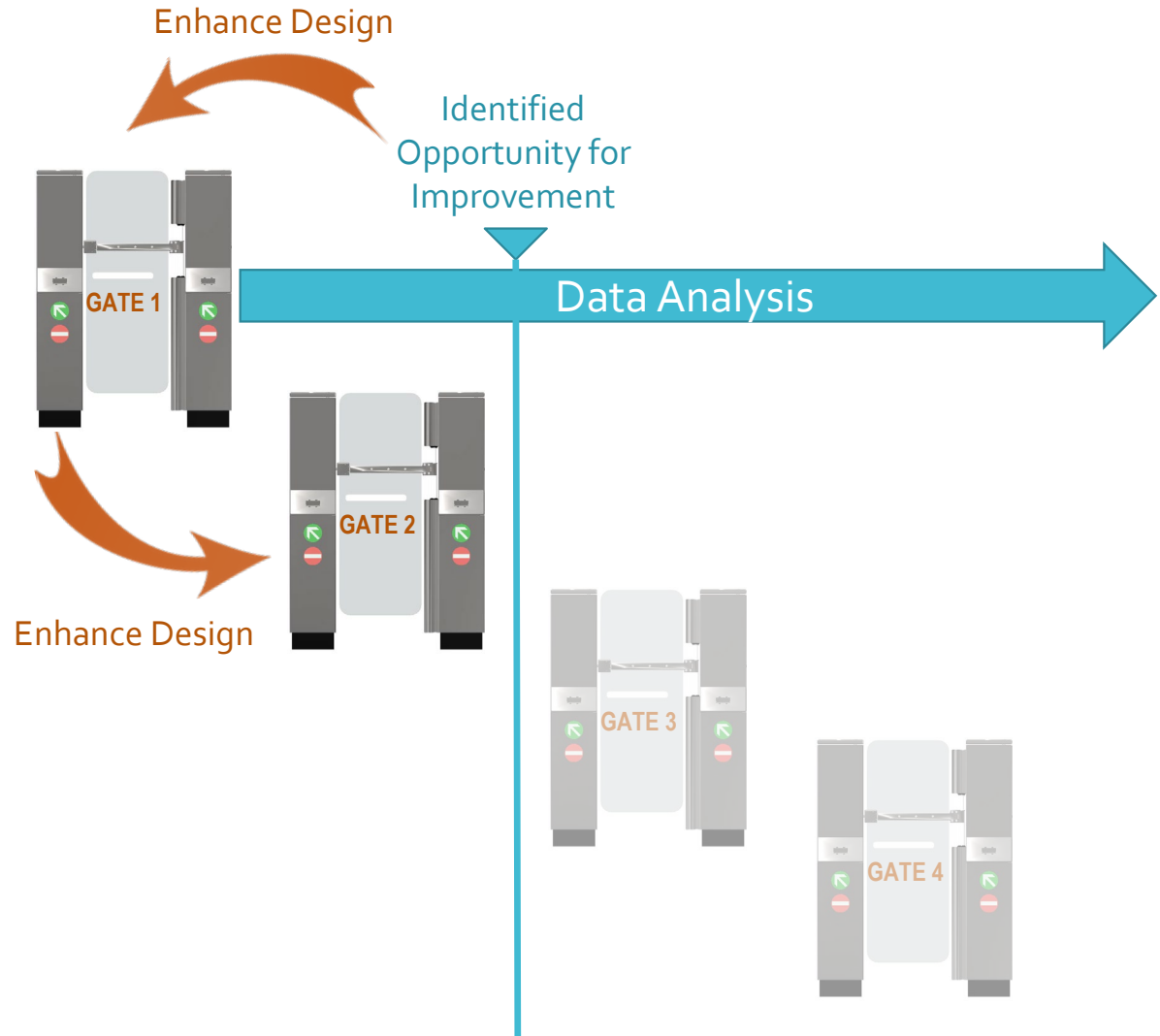
- Leaves Respond to Customer Interaction
- Softer Landing when Opening
- Reduced Wear on Parts
- Automated Barrier Speed Adjustments to reduce Maintenance tuning requirements



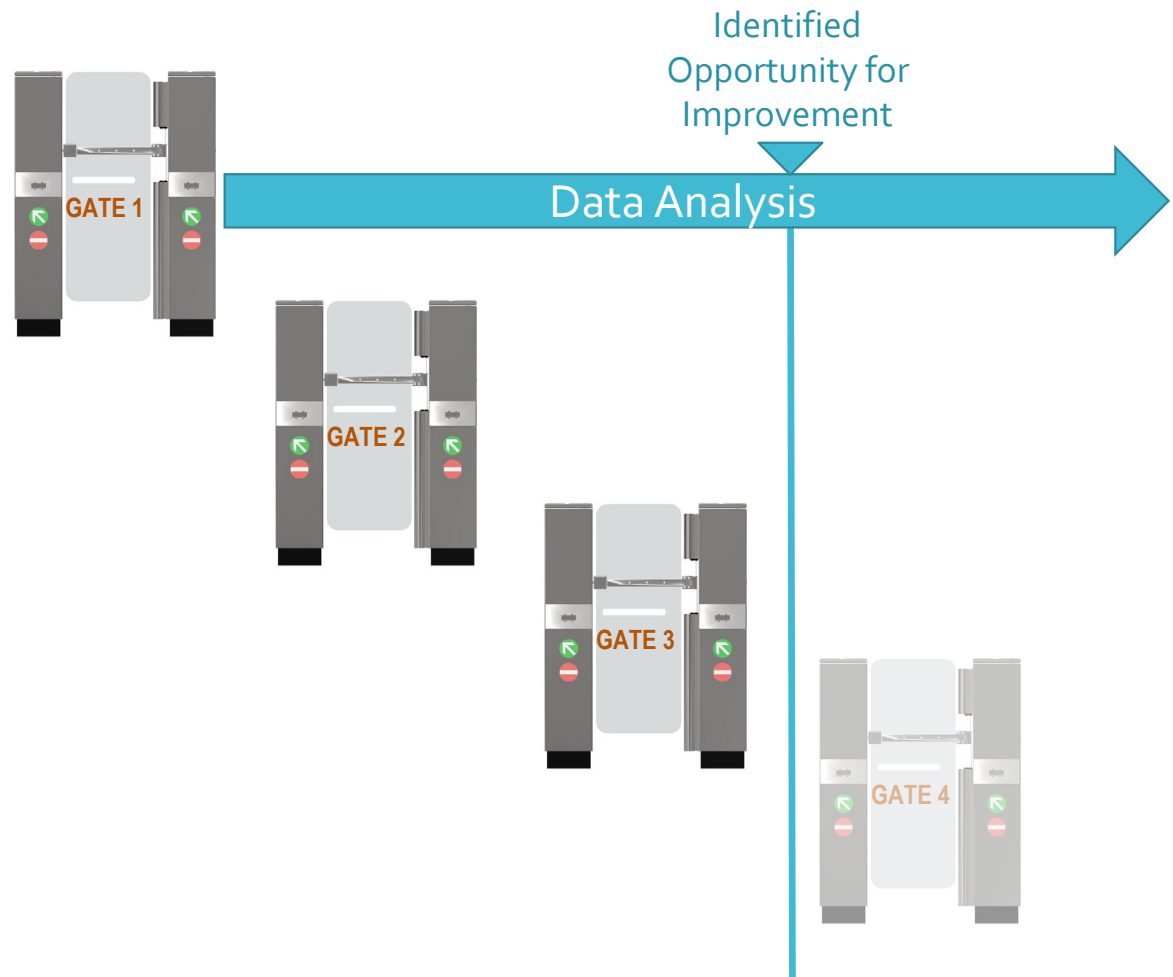
Design Iterations and Enhancements



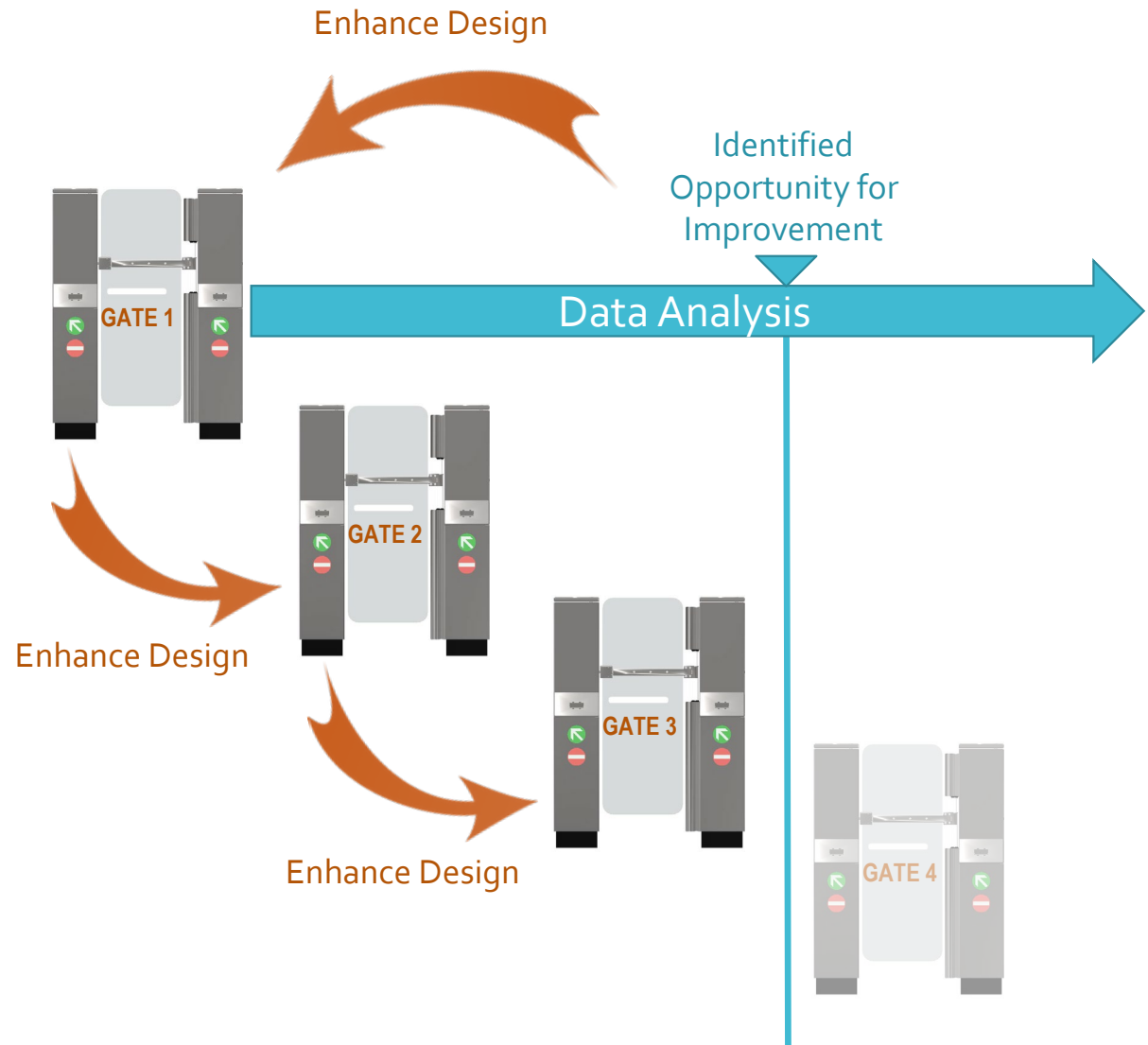
Design Iterations and Enhancements



Design Iterations and Enhancements



Design Iterations and Enhancements



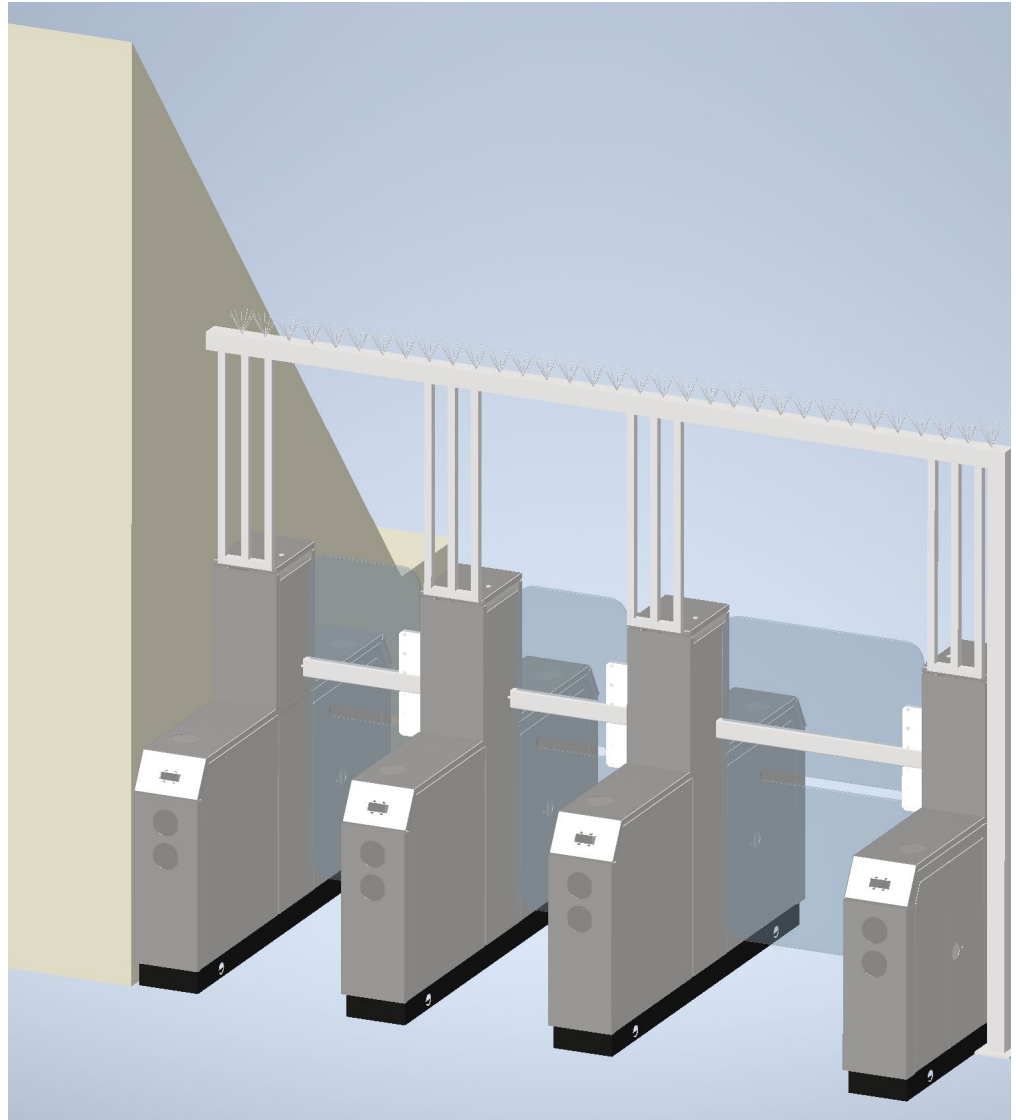


Upcoming Swing Barrier Enhancements

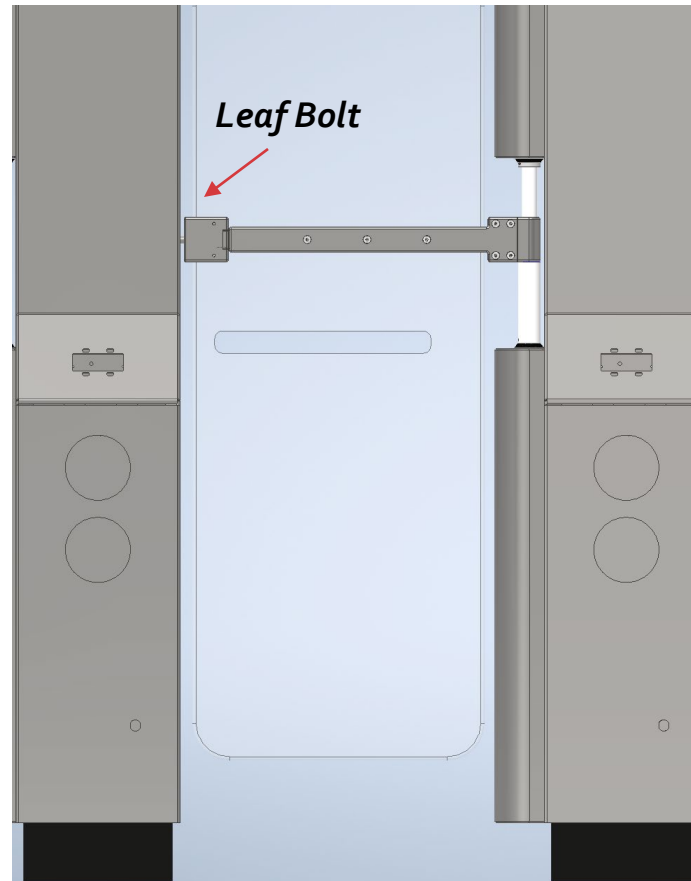
Rockridge Single Leaf Array

Aug '21

- Swing Barrier Design v 2.0
- No Magnetic Stripe Ticket
- Overhead Barrier



Single Barrier - Leaf Locking



Benefits:

- Will Prevent all Leaf Force Through
- Decreased Maintenance Costs

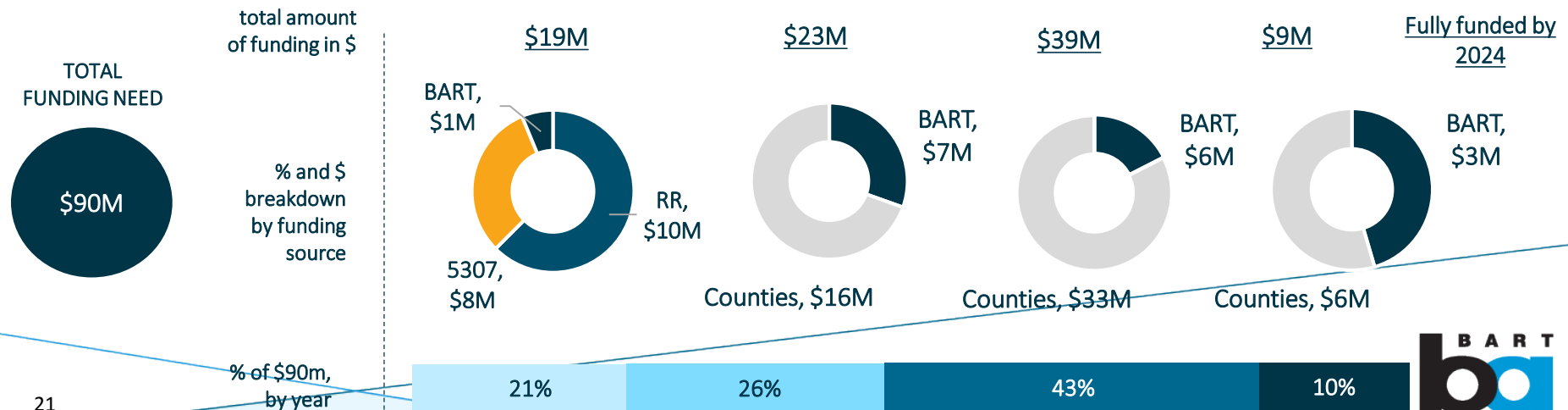
Funding

Project and Funding Needs Timeline – Dec '20

PROJECT TIMELINE



FUNDING TIMELINE



Target Funding Plan

Next Generation Fare Gates Systemwide = \$90M

County/Segment	Total # of Fare Gates	% of Total	Total Cost (\$M)	Estimated County Contribution (\$M)	Estimated BART Contribution (\$M)
Alameda (excl. 580 Corr.)	243	34%	\$ 30.6	\$ 15.3	\$ 15.3
580 Corridor	34	5%	4.3	4.3	-
Contra Costa	117	16%	14.7	7.4	7.4
San Francisco (incl. SFO)	199	28%	25.0	12.5	12.5
San Mateo (excl. SFO)	82	11%	10.3	10.3	-
Santa Clara	40	6%	5.0	5.0	-
Total	715		\$ 90.0	\$ 54.8	\$ 35.2

Secured Funding – \$40.66 million

BART

Source	Amount (\$M)	Notes
FTA Section 5307/5337 (New funding)	7.00	MTC - administered TCP Program
FTA Section 5307/5337 (Prior Year)	11.00	Part of overall M&E Project Reprioritization Process
Measure RR	10.00	Access Program Funds
Capital Allocations/Other Grants	7.18	Future Year Funds
Total	35.18	

County

Source	Amount (\$M)	Notes
Subregional Transportation Mitigation Program (STMP)	0.45	WCCTAC Administered Program
Santa Clara VTA	5.03	O&M Agreement
Total	5.48	

- Ahead of schedule – previously forecast to secure \$19M in FY21
- M&E reprioritizing, shifting funds from deferred capital projects
- Awarded \$750K WCCTAC STMP grant (including \$450K for NGFG)
- VTA's contribution covered under SVRT O&M Agreement

Pending Funding – \$41.2M

Pending - Notice of Award/Approval Pending

Source	Amount (\$M)	Notes
Affordable Housing and Sustainable Communities	6.20	Sub-applicant of 6 affordable housing projects
FY22 Appropriations Bill	5.00	Member Request Senator Feinstein
FY22 State Budget Bill	30.00	Budget Request State Senator Skinner
Total	41.20	

- Submitted NGFG for additional funding opportunities, including:
 - Requested >\$6M in AHSC funding across six applications (pending - award notification expected in October 2021)
 - Submitted \$5M request to Senator Feinstein to be included as a Member Project (earmark) in FY22 Appropriations bill (pending)
 - Submitted \$30M request to State Senator Skinner to be included as a budget request in FY22 State Budget bill (pending)
- Will continue to pursue funding opportunities as they arise

Planned & Identified Sources – \$52.48M

BART District Counties

Source	Notes
Alameda County	
Measure BB	Subject to ACTC Approval
RM2	Forecast savings from WSX; subject to MTC Approval
Measure B	Forecast savings from WSX; subject to ACTC Approval
Total - Alameda County	\$19.57 million
Contra Costa County	
State Transportation Improvement Program	Subject to support by RTPCs, CCTA, MTC; and CTC Approval
Measure J	Station Modernization; subject to CCTA Approval
Future Sales Tax Measure	Reauthorization of Measure J, timing TBD
Total - Contra Costa County	\$6.91 million
San Francisco County	
Proposition K	Subject to voter approval of Prop K Reauthorization and SFCTA Approval
Total - San Francisco County	\$12.52 million
Total - Three BART District Counties	\$39.01

Non-BART District Counties

Source	Amount (\$M)	Notes
San Mateo County - Measure W	10.32	First Call for Project in FY22; extremely competitive Program
SFO Airport Funds	3.15	Potential to leverage SFO Funds
Total Non-BART District Counties	\$13.47 million	

- In active discussions with three BART county CTAs regarding balance of funding for county share

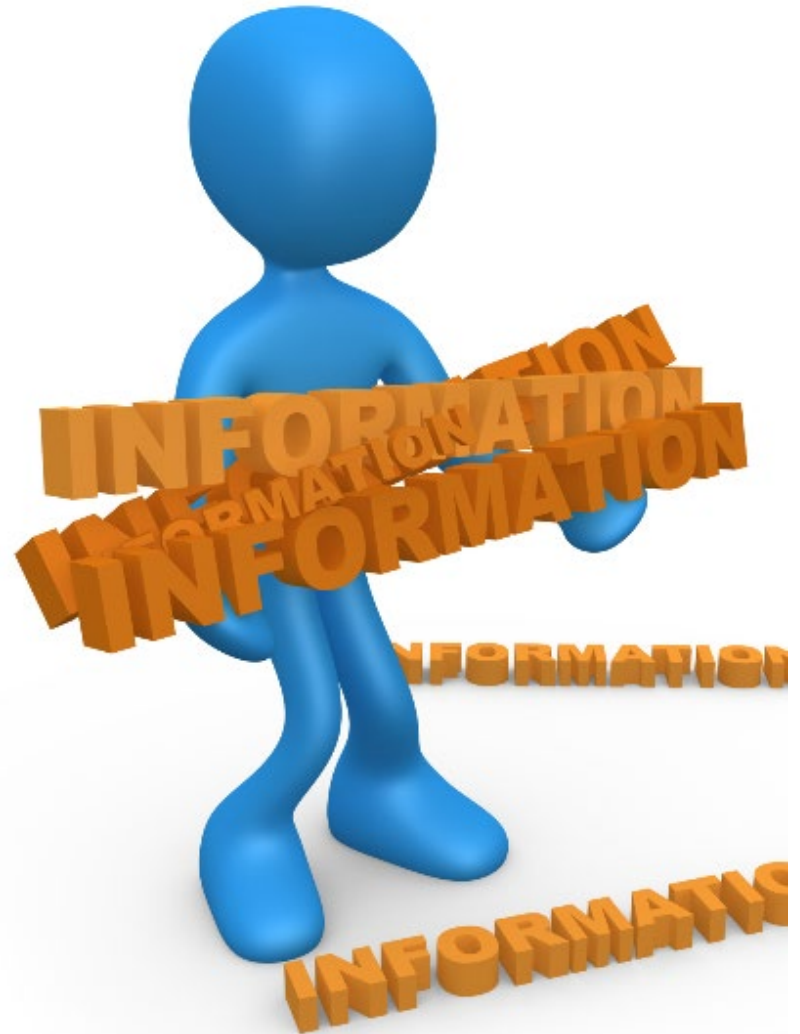


Request for Expression of Interest (RFEI) Updates

Next Gen Fare Gates RFEI

Obtain Feedback and Input on
Industry Fare Gate Solutions

- Designs
- Fare Evasion Solutions
- Fare Gate Dimensions
- Implementation Approaches



RFEI Responses Received

GUNNEBO®

CONDUENT



SCHEIDT&BACHMANN



Results

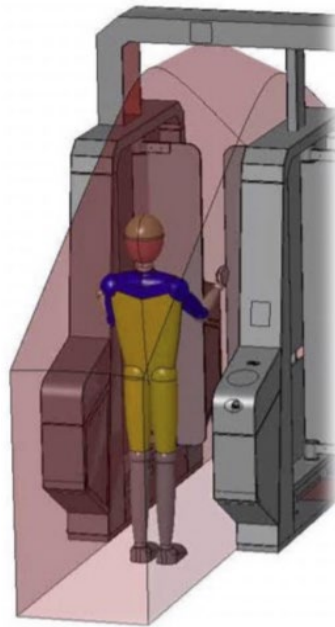
- No Off the Shelf Pneumatic Options
- Varying Lead Times
- Fit Options Included:
 - Three Options had Slimmer Consoles
 - Overhead Gantry for Cabling
 - Customized Baseplates Over Existing Footprint
 - 2 Options had Wider Than Bart's Standard
- Maintenance / Fare Deterrence Data Pending



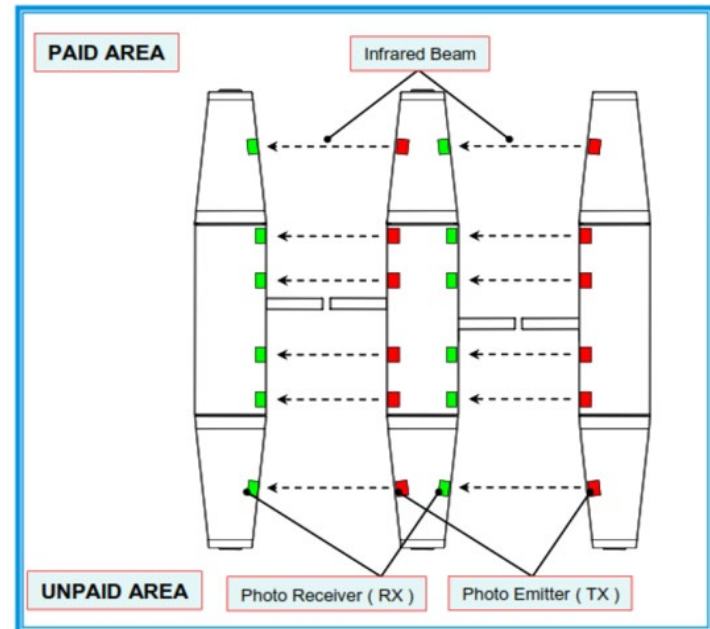
Innovation in Fare Evasion Prevention



- 3-D overhead sensors detection
- Hidden photocells tracking passenger movement
- Real-time reporting and trend analysis
- Communication with control center and ability to trigger alarms



Conduent



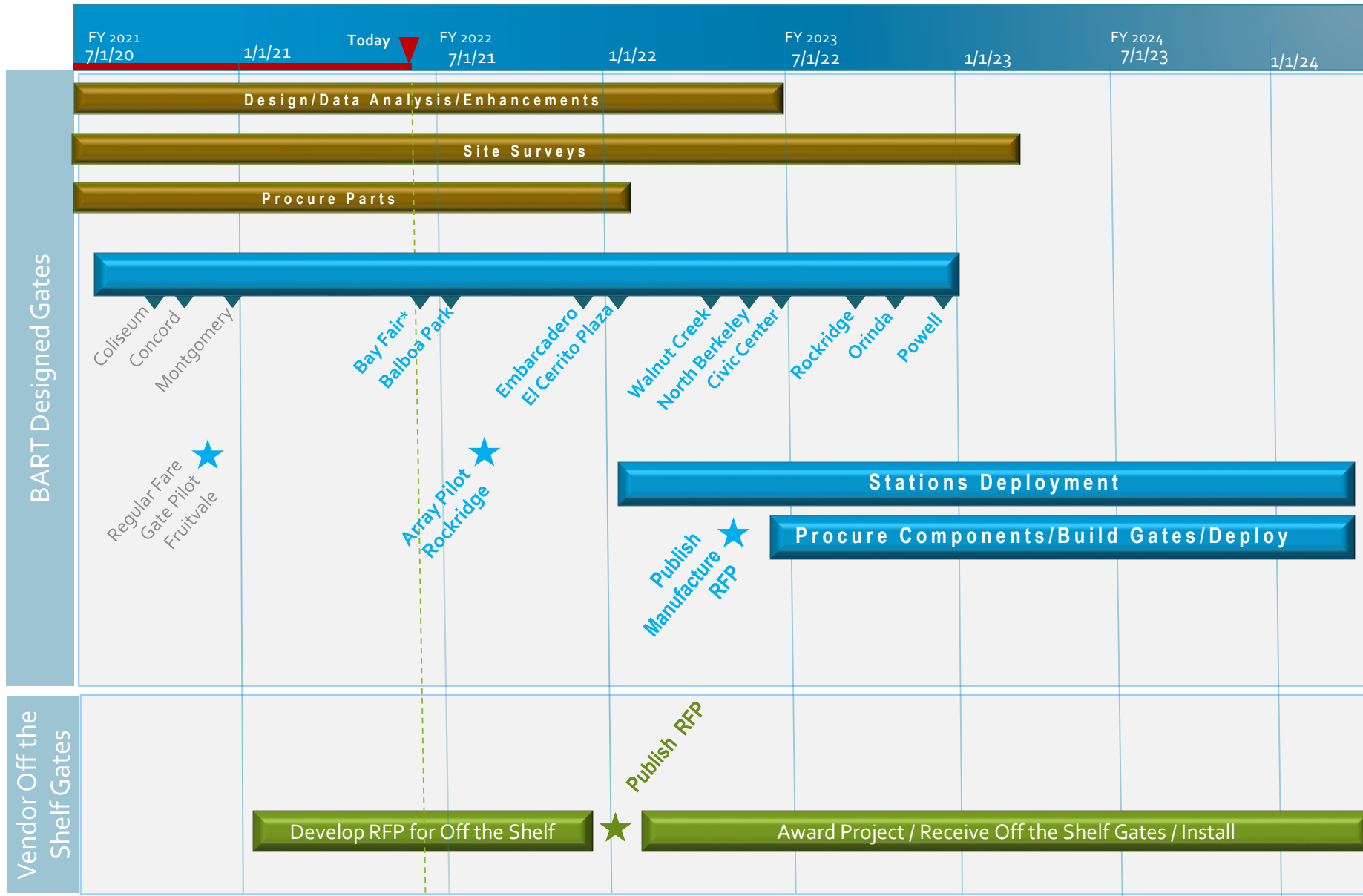
Solari

Next Steps

- Gather Maintenance Data on Gate Performance
- Proceed with Best Value RFP
 - BART's Facilities Standards (BFS)
 - BART's Technical Requirements
- Continue Hybrid Deployment with BART Designed Fare Gates



Project 2 Year Look Ahead



Station Deployment Strategy

2 Year Plan

- ✓ Smaller Arrays
- ✓ Distributed Across the District
- ✓ Diverse Fare Evasion Challenges
- ✓ Potential Initial Stations *:

- 16th St
- Balboa
- Fruitvale
- Hayward
- North Berkley
- Pittsburg Center
- Pleasant Hill
- South Hayward
- West Oakland

* Pending Site Surveys



Thank you!