NOTICE OF MEETING AND AGENDA  
BART Bicycle Advisory Task Force (BBATF) 

February 6, 2023  
6:00 p.m. – 8:00 p.m. 

BBATF Members: Jon Spangler (Chairperson), Rick Goldman (Vice Chairperson), Jianhan Wang, Jeremiah Maller, Phoenix Mangrum, Bill Pinkham, Francisco Muñoz, Tyler Morris. 

Chairperson Jon Spangler has called a meeting of the BART Bicycle Advisory Task Force on February 6, 2023, at 6:00 p.m. 

Please note, pursuant to all necessary findings having been made by the Board of Directors of the San Francisco Bay Area Rapid Transit District (for itself as well as all subordinate legislative bodies) to continue remote public meetings in the manner contemplated under urgency legislation Assembly Bill No. 361, public participation for this meeting will be via teleconference only. 

Presentation materials will be available via Legistar at https://bart.legistar.com  

You may join the Committee Meeting via Zoom by calling (833) 548 0282 and entering 827 1604 5496; logging into Zoom.com and entering access code 827 1604 5496 or typing the following Zoom link into your web browser: https://us06web.zoom.us/j/82716045496  

If you wish to make a public comment: 

1) Submit written comments via email to hmaddox@bart.gov using “public comment” as the subject line. Your comment will be provided to the Task Force and will become a permanent part of the file. Please submit your comments as far in advance as possible. Emailed comments must be received before noon on December 2, 2022 in order to be included in the record.  

2) Call (833) 548 0282 enter 827 1604 5496, dial *9 to raise your hand when you wish to speak, and dial *6 to unmute when you are requested to speak; log into Zoom.com, enter access code 827 1604 5496, and use the raise hand feature; or join the Committee Meeting via the Zoom link (https://us06web.zoom.us/j/82716045496) and use the “raise hand” feature.  

Public comment is limited to two (2) minutes per person.  

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

1. Self-introductions of members, staff, and guests: All. (For Information) 5 min.

2. General discussion and public comment: Jon Spangler. (For Information) 5 min.

3. Approval of December 2022 BBATF minutes: Jon Spangler. (For Action) 5 min.


5. Executive Committee for Off Agenda Task Force Business: Jon Spangler/Tyler Morris. (For Discussion) 30 min.

6. BART to Silicon Valley 20 min.
   a. Station Access and Design Update: Jon Spangler (For Discussion)
   b. Chair to Send Letter to Santa Clara Valley Transportation Authority (VTA) Regarding Station Access Plans: Jon Spangler (For Discussion/Action)

7. BART Bike Program Updates: Heath Maddox. (For Information) 25 min.

8. Future Agenda Items: All. (For Discussion) 5 min.
BBATF Members: Jon Spangler (Chairperson), Rick Goldman (Vice Chairperson), Jianhan Wang, Jeremiah Maller, Phoenix Mangrum, Bill Pinkham, Francisco Muñoz, Tyer Morris (Secretary).

Chairperson Jon Spangler has called a meeting of the BART Bicycle Advisory Task Force on December 5, 2022, at 6:00 p.m. via Zoom link https://us06web.zoom.us/j/81666287147

Meeting called to order at 6:06 p.m. by Chairperson Jon Spangler

In attendance:
BBATF: Jon Spangler (Chairperson), Jianhan Wang, Jeremiah Maller, Phoenix Mangrum, Bill Pinkham, Francisco Muñoz, Tyer Morris (Secretary).
BART Staff Liaison: Heath Maddox
BART Board of Directors: Robert Raburn
Guests: Gail Payne, Christopher Kidd, Pallavi Panyam (SFMTA), Robert Prinz (Bike East Bay), Jacob Dadmun (MTA)
Absentees: Rick Goldman (Vice Chairperson)

Agenda with Minutes follows as is:

1. 6:06p.m. Self-introductions of members, staff, and guests: All. (For Information) 5 min.
   1. Jon Spangler welcoming guests and colleagues
2. 6:10p.m. General discussion and public comment: Jon Spangler. (For Information) 5 min.
   1. Tyler mentioned Muni opened the new Central line subway extension
3. 6:12p.m. Approval of May, June, August & October 2022 BBATF minutes: Jon Spangler. (For Action) 5 min.
   1. May minutes
      1. Jon asked for any corrections. None noted.
      2. Bill motioned to approve, Jeremiah seconded, approved unanimously
   2. June minutes
      1. Jon asked for any corrections. None noted.
      2. Bill motioned to approve, and Jeremiah seconded, approved unanimously
   3. August minutes
      1. Jon asked for any corrections. None noted.
      2. Jianhan motioned to approve, and Jon seconded, approved unanimously
4. 6:16p.m. BBATF bylaws revision: Jon Spangler. (For Action) 10 min.
   1. Jon provided back story on the reading of and updating bylaws
   2. Jon notes that this bylaw update will settle work/moving hypotheticals for members
   3. Jeremiah motioned to approve and Jianhan seconded. Bill abstained from the vote, remaining members approved
5. 6:19p.m. Clement/Tilden Way Extension Project: Gail Payne, City of Alameda. (For Information) 25 min.
   1. Gail Payne gives introduction on the project overview
      1. Important to connect Fruitvale Bart to Alameda
      2. Encompasses multi-modal mobility
   2. $10million grant including land purchasing from Union Pacific Railway
   3. Started early 2022 with stakeholders
   4. Recommending road diet leaving Alameda
      1. High injury corridor for bicycles
      2. Support for a round-about concept
3. Existing heavy use truck route
5. Next plan revision will include zoomed in traffic detail
6. Create a “bike freeway” that will be two lanes
   1. Construction starts 2023
7. January 25, 2023 detailed plan release
8. Tyler Morris asked if there would be bike share incorporated into the Tilden design
   1. None planned
9. Jon Spangler asked about Pearl Street traffic and crossing
   1. Not be allowed to make the north bound maneuver. Only turn right.
10. Jeremiah Maller asked if there will be way finding signs as riders approach to go to Bart
    1. Gail Payne will take that idea to the design stakeholders
11. Jianhan Wang asked if there will be East direction way finding
    1. Gail Payne provides feedback as to when and where people are most likely to cross over the round-about
12. Francisco Muñoz asked for map coloring clarification
    1. Francisco asked about landscaping and sight-line interaction in the round-about
       1. Gail Payne assures there are round-about experts designing the round-about
13. Jon Spangler congratulates the design. Jon suggests Bart way finding signs direct users only from the South side.
    1. Jon asked what the width of multi-use paths will be
       1. Gail notes the design hasn’t settled on widths yet
       2. Wide access with pocket parks are a priority for design
14. Heath Maddox asks what the current bridge crossing treatments will be updated
    1. Gail noted new lane stripes will occur
15. Robert Prinz applauded the design and lends Bike East Bays’ support how ever applicable
16. Director Robert Raburn asked about dog parks and dog paths along the trail extension
    1. The City of Alameda is trying to locate a dog park on the East end of the project where land is not fully utilized
17. Gail notes the project controversy will be recommending truck traffic head Westbound
18. Bill suggests bike art in the center of the round-about
19. Gail thanks the task force for their time

6. 7:00p.m. Sansome/Battery Quick-build Project: Kimberly Leung, San Francisco Municipal Transportation Agency. (For Information) 25 min.
   1. Pallavi Panyam introduces the quick build project
      1. Noted that this is an informational presentation since its still in the design phase
2. Jacob Dadmun defines the geographical boundaries of the project which will connect Northern waterfront to Bart via Battery and Sansome
   1. 62 Injuries on Battery and 34 injuries on Sansome between 01/17-12/21
   2. Rundown of what the existing infrastructure looks like today
   3. Design lands on a two-way parallel bike path on Battery Street
   4. Considerations for left turns, emergency vehicles, and traffic calming at non-peak/peak hours
4. Implemented through 2022, and data collection starting spring 2023
5. Coincides with Better Market Street project
6. Tyler Morris asked about the Clay Street and Battery intersection turn island
7. Jon Spangler asked about specifics related to emergency vehicle operators considering “hard of hearing” cyclists
   1. No specifics are known at the time

7. 7:20p.m. San Francisco Active Communities Plan: Christopher Kidd, San Francisco Municipal Transportation Agency. (For Information) 20 min.
   1. Christopher Kidd introduces himself
   2. First city-wide bike plan since 2009
   3. Caltrans planning award to fund activities
4. Support climate action plan, support vision zero, advance equity and support bike network access with accountability
5. Update the bike comfort index as part of activities
6. Over 70 full time bike counters under SFMTA ownership
7. 1-year public outreach from 01/23-01/24
   1. Community interviews have been conducted already
8. Draft plan anticipated Fall 2023
9. Seeking SB 288 exemption
10. Bill Pinkham mentioned looking at how electric trikes/e-bikes interact with mechanical users on Class-1 tracks for data collection
11. Tyler Morris applauded the undertaking of the data collection
12. Jon Spangler looks forward to a project data presentation in a year or so
13. Director Raburn thanks Christopher for thinking of ways to integrate bike storage facilities
1. Offers any support Bart can give

8. 7:44p.m. Executive Committee for Off Agenda Letters: Tyler Morris. (For Action) 15 min.
   1. Jon Spangler suggest crafting a policy for the use of an executive committee and disclosing that at the February meeting
   2. Tyler Morris offers to create a draft letter for the task force to consider in February that can be used to author support for future infrastructure projects
   3. No objections given to tabling this further to the February agenda

9. 7:49p.m. BART Bike Program Updates: Heath Maddox. (For Information) 5 min.
   1. Heath Maddox gives an update on Bike Link phone app and ease of bike parking access
   1. Jon Spangler asks when app changes take affect
      1. January 7, 2023
   2. Heath made a presentation to the Board of Supervisors (SF) about bike parking
   3. 90% design completion for 19th Street bike parking project
      1. Comments on e-bike charging at forefront of design
      2. Safety issues around charging infrastructure against theft and fire
   4. Bicycle stair channels phase 1
      1. Identified a project manager
   5. Bart Bicycle Preferred Path of Travel
      1. $200,000 “R” funds for project
      2. Jon Spangler asked if we can add this to the February agenda
   6. Jon Spangler asked for clarification on rider comments about bike rack straps
      1. Riders don’t like the straps because the three straps are all the same length
      2. Challenge for maintenance crews
   7. Director Raburn asked if the Safe Routes solicitation gone out
      1. Has not

10. 8:01p.m. Future Agenda Items: All. (For Discussion) 5 min.
    1. Bike straps on Bart
    2. Bart Bicycle Preferred Path of Travel
    3. Executive Committee with Tyler Morris
    4. Safe Routes

Meeting adjourned at 8:08 p.m. by Chairperson Jon Spangler
Next meeting is called for by Chairperson Jon Spangler on February 6th, 2023 at 6:00p.m.
Oakland-Alameda Estuary Bridge

A New Bicycle-Pedestrian Connection

East to west aerial view of the Oakland Estuary
Photo Credit: Maurice Ramirez

Concept Image of Oakland-Alameda Estuary Bridge
Source: HNTB
Project History

2009
Estuary Crossing Feasibility Study

2021
Estuary Crossing Study and Travel Demand Study

2022-2024
Oakland Alameda Estuary Bridge Project
Project Initiation Document (PID)

We are here
# Overall Schedule

<table>
<thead>
<tr>
<th>2022 - 2023</th>
<th>2024 - 2026</th>
<th>2027 - 2029</th>
<th>2030 and beyond</th>
</tr>
</thead>
</table>

## PID

- We are here
  - TAC, SAC, EAC, public meetings
  - Identify CEQA/NEPA Lead
  - Complete PID
  - Public Meeting(s)

## PAED

- Draft Circulation of Environmental Document
- Complete Project Report/Prelim Design
- Outreach updates
- Acquire Right of Way
- Secure Permits
- Final Design

## PS&E

- Opening Day

## Construction

## Funded

## Unfunded
Need – Limited Access

Barrier Effect:
Limited cross-estuary bike and pedestrian facilities between western Alameda and Oakland create a barrier to walking/biking between these two communities.

- Access impacts Equity and EJ communities
- Transit – AC Transit buses and SF Bay Ferry require fees and are not offered 24 hours per day
  - Reduced service on weekends
Underground Posey Tube path:

- Substandard 3’ biking/walking path
- Negative user reactions
- Opening a second path (Webster Tube) is not a long-term fix
- Provides for less than 10% of estimated demand
Bay Trail and local trails in two cities do not connect across the estuary.
Caltrans District 4 identified a Webster Street connection as one of the top 3 corridors for a future bike highway.

Source: Caltrans Bay Area Bike Highway Study (2022)
Need – Support Regional Growth

• Today approximately 48,000 motor vehicles per day travel between western Alameda and downtown Oakland via the Tubes.

• Planned Growth in both cities would increase demand for cross estuary trips in 2030 to approximately 56,000 trips.

• Planned Development: mixed-use residential, urban infill, Transit Oriented Development underway on both sides of the Estuary.
• Reduce vehicle trips

• Health: Mode shift from motor vehicles could off-set the expected increase in air pollutant emissions, thereby protecting community health and promote increased physical activity.

• Greenhouse gas (GHG) emissions: Alameda and Oakland support mode shift away from single-occupancy fossil fuel vehicles to:
  • Reduce transportation pollution/ contributions to climate change
Thank You

Video Credit: Maurice Ramirez
Agenda

- APTA Independent Peer Review
- FTA Funding Update
- Upcoming December Board Items
Peer Review Background

As a follow up to May Board Direction:

• VTA, in partnership with the American Public Transportation Association (APTA), commissioned an independent review (Peer Review/Exchange) to support the ongoing project delivery efforts of the BART Phase II Project

• Over the last few months, APTA conducted this effort with a peer review team consisting of experts in tunneling, station architecture and project management

• These independent subject matter experts reviewed existing documentation, engineering records and conducted technical sessions considering:
  – review of the single-bore and twin-bore tunneling methodology
  – customer access and customer service with the current underground station design
What is an APTA Peer Review?

- Provides transit agencies expert advice, industry best practices, and recommendations from highly experienced and respected transit professionals.
- Not intended as a comprehensive assessment or engineering analysis of the BART Silicon Valley Phase 2 Extension.
- Goal: respond to specific questions regarding the feasibility and appropriateness of the tunneling approach based on international tunneling experience.
Questions Posed to the Experts

1. What are the trade-offs between single- and twin-bore tunnels, including safety, passenger experience, cost and delays

2. Is use of a single-bore tunnel for the BART extension:
   • Feasible
   • Appropriate
   • Safe
   • Efficient

3. How much delay would be required for a change in design?

4. What are the major risks that must be mitigated?
APTA’s Tunneling Experts
– 100 Large Tunnels Across the World

**Anthony Burchell**, Project Director, Chennai Metro Phase 2
- Underground metro projects in: Hong Kong, Tel Aviv, Dubai, Cairo, Singapore, London, Madrid, New Delhi, Chennai and Qatar
- Single Bore (Dubai, Madrid and Cairo) and Double-Bore Tunnels (London, Hong Kong, Singapore, New Delhi, Qatar, Tel Aviv, Chennai)

**Donald Richards**, Retired
- Extensive tunneling experience in the US, Canada and 21 countries
- Metro experience in Taipei, Cairo, Toronto, Singapore, LA, SF, DC, Seattle, NYC, Baltimore, Austin
- Large bore tunnel experience in Seattle, Istanbul and Miami; studies in Dublin
- Tunnel work includes rail, highways, underground metro projects, wastewater and sewer, mines, underground oil storage, and underground defense-related project facilities
Peer Review Activities

• Review of project documents and other project-related materials
• Review of recent global tunneling projects
• Presentation from KST on proposed design innovations
• Peer exchange with staff on risks and global lessons-learned
Metro Tunneling Options

• Until recently, most metro/heavy rail tunnels built using twin-bore tunnels
• Recent technology has facilitated larger, single-bore tunnels
  – Increasingly used for transit in Europe/Asia and for highways/water projects in US
    ▪ Transit: Paris & most French Metros, Madrid, Dubai, Netherlands;
    ▪ Canada: Metrolinx Scarborough Extension first single-bore transit in North America
    ▪ In US: Alaskan Way highway (57.3’); Hampton Roads Bridge/Tunnel (46’); under review in Los Angeles for multiple projects
Key Factors Impacting Selection

1. **Surface Disruption**
   - Twin-Bore tunnels cause more surface disruption due to:
     - Cross-overs
     - Cross passages
     - Stations: cut & cover stations
     - Utilities relocations
     - Traffic diversions

2. **Soil Variation**

3. **Water Table**

4. **Experience of the Contractors**
## Trade-Offs Between Twin-Bore and Single-Bore

<table>
<thead>
<tr>
<th>Attributes</th>
<th>Twin Tunnel /single track</th>
<th>Single tunnel - 2 tracks</th>
<th>Single Tunnel – 2 tracks w/ platform inside the tunnel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevalence</td>
<td>Many twin-bore tunnels across the world</td>
<td>Over <strong>40 large</strong> (over 45-feet diameter) road/transit/water tunnels in Europe and Asia. Barcelona is the largest two-track rail tunnel to date with an internal diameter of 39.7 feet (in construction)</td>
<td></td>
</tr>
<tr>
<td>Examples</td>
<td>London; Munich; Copenhagen; Tel Aviv; Qatar; Tokyo; Shanghai; Delhi</td>
<td>Milan; Toronto; Cairo; Paris Athens, Madrid, Dubai;; Netherlands; Metrolinx Scarboro Extension (in construction)</td>
<td>Barcelona Line 9</td>
</tr>
<tr>
<td>Typical Internal Diameter</td>
<td>20 feet</td>
<td>27-32 feet</td>
<td>Barcelona = 40 feet</td>
</tr>
<tr>
<td>Typical Depth to platform</td>
<td>Min usually 50 feet</td>
<td></td>
<td>Minimum usually 65 feet</td>
</tr>
</tbody>
</table>
# Trade-Offs Between Twin-Bore and Single-Bore

<table>
<thead>
<tr>
<th>Attributes</th>
<th>International Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Passenger Safety</td>
<td>No difference in safety from the passenger perspective; fire code requires center wall between tracks or Annex structures in single-bore tunnel</td>
</tr>
<tr>
<td>Passenger Experience</td>
<td>• Single-bore tunnel will be deeper, requiring longer vertical access.</td>
</tr>
</tbody>
</table>
| Efficiency/Ease of Construction    | • Twin-bore requires special structures for cross-overs  
  • Single-bore uses a large TBM, which must be deeper to control settlements.  
  • Cut and Cover stations, while easier to build, create significant surface disruption, traffic & utility relocation issues  
  • Single-bore require large adit connections to stations. Risk is reduced with diaphragm walls (or equivalent) from the surface (as in Barcelona) |
| Cost                               | • Twin-bore tunnels with cut & cover stations typically are less expensive initially, but traffic mitigation, surface disruption and utility relocation costs can reduce or eliminate this margin. |
VTA/BART Rationale For Single-Bore Approach

The 2017 SVSX Single Bore Feasibility Study found the following benefits for a single-bore versus a twin-bore tunneling approach:

- Smaller station footprint
- Less right-of-way acquisitions
- Reduced environmental impact during construction
- Smaller station footprint permits greater opportunity for joint development of the station sites
KST’s Proposal for Side-By-Side Tracks Reduces Risks

KST has proposed using side-by-side tracks at stations instead of the stacked-track plan

- Facilitates smaller adits, reducing construction risk and extent and cost of ground treatment
- Slight increase in tunnel diameter, but no appreciable risk increase
- Enhances passenger experience by reducing vertical access and providing an Island platform
Questions Posed to the Experts

1. **Is A Single-Bore Tunnel Feasible?**

   **Yes.** Requires mitigation to address the following risks:
   - Settlement
   - Cover: Requires increased cover (*or other functionally equivalent blow out resistant structural arrangement*)
   - Soft ground below the water table
   - Unforeseen conditions: Wells or boulders, if encountered, are more difficult to address using a large TBM
   - Adit construction: Requires extensive soil treatment or ground freezing
Questions Posed to the Experts

2. Is a Single-bore Tunnel Appropriate for the BART Extension?
   • Both tunneling approaches would work
   • Each approach brings different risks that must be mitigated by a highly skilled and experienced contractor.

3. Does the Tunnel Approach Impact Passenger Safety?
   • No. Must meet same federal and state safety requirements regardless of approach
     – Safety during construction: Deeper depth and construction of large adits pose more risk. However, a skilled contractor can safely construct either tunnel type.
Questions Posed to the Experts

4. Is One Approach More Efficient?
   • Less surface disruption with single-bore
   • Both smaller and larger TBMs pose similar mechanical and operational problems
   • Internationally, twin bores typically are cheaper and quicker; with different regulatory requirements, may not apply to the US

5. What is the Impact of a Decision to Change Tunnel Approach?
   • Design: 6-12 months to revise the design
   • NEPA: amendment of the EIS would have to await engineering and then review/public engagement, resulting in as much as 2-year delay.
   • Cost: Increased cost for design and for time delay
Summary & Observations

1. Single-bore tunnel is feasible and appropriate
2. Single-bore tunnel will reduce above-ground and street disruption
3. Regardless of which tunnel option is selected, construction risk cannot be eliminated, but measures can be taken to account for it.
   • Adit construction requires certainty that the ground is safe for excavation
   • The island platform proposal is a significant improvement and risk mitigation measure
4. KST has assembled a highly experienced and skilled team
5. A design change to twin tunnels at this stage will cause a significant delay and cost to the project
## Major Risks and Recommended Mitigation

<table>
<thead>
<tr>
<th>Risk</th>
<th>Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adit Construction</td>
<td>Consider a perimeter slurry/diaphragm wall with ground treatment and dewatering prior to TBM arrival. If not possible, freezing is a good option. Recommend hand mining of the adit with multi-drift method and highly experienced crew.</td>
</tr>
</tbody>
</table>
| Excessive settlement in TBM drive    | • Contractor must control ground stability (soil conditioning), face pressures, grout mix, sufficient tail void grout lines, tail seal greasing, and emergency redundant tail seal mechanism.  
• TBM design should be reviewed by experienced independent experts. |
| Geotechnical and unforeseen conditions (e.g., wells, boulders, foundations) | Identify and locate any obstructions in advance of tunnel construction. Consider having discrete zones of pre-treated ground where the TBM can stop and the cutterhead inspected |
## Major Risks and Recommended Mitigation

<table>
<thead>
<tr>
<th>Risk</th>
<th>Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Cover Above TBM</td>
<td>Apply a surcharge load and/or ground improvement at TBM launch and exit points with a detailed evaluation of the factor of safety of the proposed schemes to be used</td>
</tr>
</tbody>
</table>
| Abrasivity of Subsurface Soils | • Deeper tunnel likely to encounter more abrasive sand.  
• Use hardened steel cutters and hard facing on TBM  
• Maintain wear detectors.  
• Increasing the lab abrasion tests                                      |
| Tail Seal failure            | • TBM design should permit replacement of at least one row of tail seal brushes.  
• Provide an emergency seal in the design.  
• Initial grease packing then continuous grease injection  
• Strong TBM steering control to maintain clearance                        |
# Major Risks and Recommended Mitigation

<table>
<thead>
<tr>
<th>Risk</th>
<th>Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Failure of Main Bearing</td>
<td>• TBM design should ensure bearing seals are protected</td>
</tr>
<tr>
<td></td>
<td>• Ensure excellent Quality Control during manufacture and initial testing</td>
</tr>
<tr>
<td>Risk of a Blowout</td>
<td>Identify and seal any wells or boreholes in advance</td>
</tr>
<tr>
<td>Face Interventions to check for damage, blocking, high torques,</td>
<td>• Face interventions are very difficult in a large TBM as compressed</td>
</tr>
<tr>
<td>overheating</td>
<td>air cannot hold such a large face.</td>
</tr>
<tr>
<td></td>
<td>• Provide locations for intervention. Provide advance ground treated</td>
</tr>
<tr>
<td></td>
<td>areas or, if adits are built with Diaphragm walls, the TBM can stop</td>
</tr>
<tr>
<td></td>
<td>there.</td>
</tr>
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</table>
FTA Funding Update

• VTA has submitted a request to FTA to transition the project into CIG (New Starts) allowing a higher federal funding contribution

• Letter of No Prejudice (LONP) requested to allow for continued pre-award authority and uninterrupted project activities

• Discussions with FTA continue developing a roadmap to a Full Funding Grant Agreement (FFGA)
## Key Differences between CIG and EPD

<table>
<thead>
<tr>
<th>TOPIC</th>
<th>CIG</th>
<th>EPD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rating</strong></td>
<td>An overall project rating of Medium or higher. Project is evaluated in Project Justification and Financial Assessment</td>
<td>No rating process in EPD. Project justification is evaluated in five areas based on Sponsor’s submittals- no specific format is required</td>
</tr>
<tr>
<td><strong>Funding</strong></td>
<td>CIG share not to exceed 60 percent for New Starts project, total federal share not to exceed 80 percent</td>
<td>Total federal share not to exceed 25 percent</td>
</tr>
</tbody>
</table>
| **Financial Assessment** | ▪ Criteria by Statue as described in CIG Policy Guidance and Reporting Instructions  
▪ Projects must have an “acceptable degree of local financial commitment including evidence of stable and dependable financing sources”  
▪ All non-CIG funds fully committed prior to the Grant Agreement  
▪ A 20-year cash flow and financial plan are required  
▪ FTA evaluates current capital and operating condition; commitment of capital and operating funds; and reasonableness of capital and operational cost estimates and planning assumptions | ▪ Criteria in NOFO  
▪ Private/public partnership (P3) required to qualify  
▪ Time period for financial review is condensed  
▪ Sponsor submission includes budget, evidence of capital and operating funds, the most recent audited financial statement  
▪ FTA conducts a limited review on level of funding commitment |
| **Pre-award Authority** | ▪ Varies by project phases and NEPA completion status  
▪ Construction is allowed on approved LONP | ▪ Full pre-award authority on project selection including construction  
▪ Letter of Intent documents additional conditions sponsor must meet, should an FFGA have been awarded  
▪ No LONP is required in EPD process |
# EPD to CIG: Path Forward

<table>
<thead>
<tr>
<th>ACTION</th>
<th>DESCRIPTION</th>
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</table>
| **VTA:** Complete remaining PD activities | • Submits materials for FTA to conduct project rating and evaluation  
  • Completed activities: Select an LPA; LPA in fiscally constrained transportation plan (Complete); Complete NEPA (Complete) and  
  • Incomplete activities: Develop rating information* |
| **VTA:** Submit formal request for Entry into New Starts Project Development (PD) and Letter of No Prejudice (LONP) | • Letter to transition from EDP Pilot Program to New Starts (PD) in FTA's CIG Program  
  • LONP to incur project costs for final design, enabling works, long lead procurement, and limited construction activities |
| **FTA:** Approve VTA’s request for entry to PD and issue an LONP | • Project formally in CIG  
  • Project activities continue under LONP, EPD LOI gets null and void  
  • Existing EPD allocations are not transferrable to CIG |
| **FTA:** Notify VTA the project rating (prior to Annual Report release) | • Project must receive an overall rating of Medium or higher* |
| **FTA:** Publish rating in FY2024 Annual Report | • With an overall Medium rating or better, project is eligible for FY2024 appropriation from Congress  
  • FTA has provision to allocate funds from existing appropriations |
| **VTA:** Submit request to enter into Engineering. Application can be submitted any time after project receives an overall Medium rating or better | • Submit materials for FTA to initiate review for engineering  
  • PMOC reviews the submittals and initiate a formal risk refresh  
  • FMOC reviews updated financial plan and cash flow  
  • LONP submitted during PD application continues |
| **FTA:** Approve project into Engineering | • Project enters New Starts Engineering phase after satisfying FTA criteria |
| **VTA:** Submit request to execute FFGA | • Submit materials for FTA to initiate Readiness Report, FFGA development, approvals and execution |

*Steps not required in EPD Pilot Program
Upcoming December Board Items

• **Information Item:** Update on Station Refinement Work

• **Action Item:** Authorize the GM/CEO to issue Contract Amendments up to $460,000,000 for Early Work Packages related to Contract Package 2 Tunnel/Trackwork including:
  – Purchase of Tunnel Boring Machine (TBM)
  – Associated TBM works
  – West portal construction activities
## BayWheels Bike Share Ridership at BART Stations (2022)

<table>
<thead>
<tr>
<th>Station</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
</tr>
</thead>
<tbody>
<tr>
<td>16th St. Mission</td>
<td>1,084</td>
<td>1,395</td>
<td>1,762</td>
<td>1,672</td>
<td>1,766</td>
<td>1,909</td>
<td>1,901</td>
<td>1,996</td>
<td>1,951</td>
<td>1,878</td>
<td>1,694</td>
<td>1,178</td>
</tr>
<tr>
<td>MacArthur</td>
<td>600</td>
<td>721</td>
<td>810</td>
<td>795</td>
<td>1,020</td>
<td>1,125</td>
<td>1,139</td>
<td>1,318</td>
<td>1,351</td>
<td>1,213</td>
<td>856</td>
<td>634</td>
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<tr>
<td>Lake Merritt</td>
<td>306</td>
<td>359</td>
<td>411</td>
<td>416</td>
<td>474</td>
<td>521</td>
<td>490</td>
<td>452</td>
<td>521</td>
<td>464</td>
<td>366</td>
<td>235</td>
</tr>
<tr>
<td>Rockridge</td>
<td>253</td>
<td>303</td>
<td>465</td>
<td>465</td>
<td>564</td>
<td>620</td>
<td>466</td>
<td>510</td>
<td>483</td>
<td>325</td>
<td>289</td>
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<tr>
<td>Ashby</td>
<td>208</td>
<td>323</td>
<td>349</td>
<td>339</td>
<td>459</td>
<td>451</td>
<td>432</td>
<td>524</td>
<td>497</td>
<td>449</td>
<td>400</td>
<td>254</td>
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<tr>
<td>North Berkeley</td>
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<td>189</td>
<td>261</td>
<td>293</td>
<td>341</td>
<td>248</td>
<td>286</td>
<td>189</td>
<td>316</td>
<td>262</td>
<td>190</td>
<td>139</td>
</tr>
<tr>
<td>Glen Park</td>
<td>200</td>
<td>265</td>
<td>273</td>
<td>391</td>
<td>313</td>
<td>380</td>
<td>456</td>
<td>447</td>
<td>375</td>
<td>405</td>
<td>307</td>
<td>221</td>
</tr>
<tr>
<td>Balboa Park</td>
<td>26</td>
<td>29</td>
<td>43</td>
<td>42</td>
<td>61</td>
<td>83</td>
<td>77</td>
<td>78</td>
<td>79</td>
<td>74</td>
<td>80</td>
<td>53</td>
</tr>
</tbody>
</table>

### All BART Locations:

- January: 2,878
- February: 3,584
- March: 4,374
- April: 4,334
- May: 4,899
- June: 5,281
- July: 5,401
- August: 5,470
- September: 5,600
- October: 5,228
- November: 4,218
- December: 3,003

- All BART Locations: 29,303
### BART Secure Bike Parking Occupancy & Bike Share Trips
(2022, District-wide)

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>All BART Bike Stations</strong></td>
<td>2,114</td>
<td>2,758</td>
<td>3,914</td>
<td>4,781</td>
<td>4,373</td>
<td>3,428</td>
<td>2,989</td>
<td>4,912</td>
<td>6,025</td>
<td>6,017</td>
<td>4,854</td>
<td></td>
</tr>
<tr>
<td><strong>All BART BikeLink Lockers</strong></td>
<td>3,307</td>
<td>3,975</td>
<td>5,641</td>
<td>5,412</td>
<td>5,920</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>All BayWheels BikeShare Trips at BART Stations</strong></td>
<td>2,878</td>
<td>3,584</td>
<td>4,374</td>
<td>4,543</td>
<td>4,005</td>
<td>5,081</td>
<td>5,405</td>
<td>5,470</td>
<td>5,600</td>
<td>5,228</td>
<td>4,218</td>
<td>3,003</td>
</tr>
</tbody>
</table>
Hi Heath,

See customers feedback regarding the bike racks on the FOTF trains.

Name: Alan  
Email: atonbn@gmail.com  
Phone: (510) 365-4199

Regards,

Michelle  
BART Customer Services

===========================================

Case 00296524: ride on Sun. 11/27/22

I rode the Berryessa line and noticed two things during a pleasant and uneventful ride. There is no clock with the present time displayed. Yet there are plenty of video displays showing the next station name and 4 or 5 other messages. A clock would be useful to many riders and encourage practical and sensible ride activity. We hurry and plan to get to the train and ride, so tracking the time is helpful.

Secondly the new cars have bike racks that are single rails at the side of the car, not the 3-post setup (3 bikes in parallel) that were being used a half year ago. If ridership is declining then this is perhaps justified but if we get crowded trains again, I think the 3-post racks are an advantage so please don't get rid of them.

Thank you, a bike rider, Alan
ref:_00Dd0hrYV._5006T25Xu9f:ref
Hello Heath, Brian:

See suggestion at bottom. Email was received 11/22/2022 5:50 AM

Regards,

Samson Wong
BART Customer Services

M-F 8am to 5pm

510-464-7134

===========================================

Contact Name  Milo Linaman
Contact Email  linamanlearn@gmail.com
Contact Phone  (415) 964-9204
Received Date  11/22/2022

Description  Milo Linaman
linamanlearn@gmail.com
I have a suggestion regarding bikes. Since the straps on the bars for bikes in the cars are ineffective and often missing or broken, BART could distribute either for free or for a small price, Velcro straps that are branded with the Bart logo to cyclists. I carry one around and it’s very effective at keeping my bike stable during trips.

Via iOS app Version 1.20.0018
ref:_00Dd0hrYV_5006T25WxBK:ref
Dear Carrie,

Thank you writing us about your experience with the BART bike straps, and please accept my apologies for not responding earlier--your email got lost in my inbox after I was out with an injury.

We are aware that the straps would be more useful for the outer bikes, and I sincerely wish there were a simple solution I could offer. The straps went through extensive and iterative testing but I’m afraid that, as is often the case, the final result was a compromise that responded to a number of competing priorities.

Our initial design for the straps was in fact longer, to better accommodate wider or loaded bikes. Unfortunately, however, we were unable to implement the longer straps due to the potential for the straps to be sucked onto and obstruct the air intake grate immediately below the bike lean bar on both old and new BART cars (see attached photo). Due to the very real potential for compromising the climate control and air filtration system on the cars, having longer straps was unfortunately non-negotiable. We did try a number of different buckle and strap configurations to address the issue while still providing sufficient length for wider bikes, but were ultimately unsuccessful.

All that said, and your experience notwithstanding, the feedback we have received on the straps so far has been overwhelmingly positive and reinforces the decision to halt installation of the clamper-style racks that were initially deployed on the new cars and replace all existing racks with bars and straps.

A few final things to consider:
- One observation that my colleagues and I made during testing was that if the bike nearest the lean bar is secured with a strap and additional bikes are leaned against this secured bike without being strapped themselves, the outer bikes are actually fairly stable since the handlebars, pedals, etc tend to keep them from rolling away.
- When I load my bicycle for touring or carrying a lot of cargo, I will almost always have an extra strap or bungee which can easily be put into service tethering my bike. If you know you will be riding BART with a loaded bike, bringing an extra strap is a good idea, just in case you can’t get the spot closest the rail. In a pinch, a helmet strap can sometimes work to tether to the adjacent bike.
- As a longtime BART-with-bike user, before the straps were implemented, I would try to sit in the seat nearest to my bike so I could keep a hand on it to keep it from rolling away. If a seat were not available, I’d either stand near my bike, or sometimes politely ask the person sitting nearest the bike area if they could perhaps move to a nearby seat.

Sincerely,

Heath Maddox
Manager of Bicycle Access Programs
Bay Area Rapid Transit District
2150 Webster Street, 8th Floor
Oakland, CA 94612
Hello Carrie,

Thank you for contacting BART Customer Services. We will forward your suggestion to our bike team.

Regards,

Samson Wong
BART Customer Services

M-F 8am to 5pm

510-464-7134

cc: Bike Access team

===========================================
Case 00291180: Straps on bike racks on new trains

Good morning! The straps on the bike racks are only long enough to attach the bike that’s closest to the rack itself. Could you please add longer straps?
ref: _00Dd0hrYV_._5006T21qLc7:ref