

**Metropolitan Transportation Commission
Programming and Allocations Committee**

December 11, 2019

Agenda Item 2f

Transit Performance Initiative – Investment Program Semi-Annual Update

Subject: Semi-annual update on the progress of projects awarded under the Transit Performance Initiative (TPI) Investment Program and minor scope modification on SFMTA Colored Lanes Round 2 Award.

Background: The TPI Investment program funds low-cost capital investments that can be implemented rapidly to improve operations and customer experience on major transit corridors and systems. Since 2012, \$90.9 million has been programmed to 31 projects, and 14 of these have been completed or are substantially completed. AC Transit reports results of the Line 97/South Alameda project a 17% improvement in transit travel times in the northbound direction. Additional performance results for recently completed and soon-to-be completed projects are expected for the next semi-annual update.

This program update covers the period from May through November 2019. Please refer to attachments A and B for further information.

SFMTA Colored Lanes Minor Scope Modification Request

In the second competitive round of the TPI Investment program, SFMTA was awarded \$1 million for the Colored Lanes on MTA Rapid Network Project, which planned to colorize existing transit lanes along several Muni rapid corridors. SFMTA proposes a minor scope modification to change one Colored Lanes location from West Portal Avenue to a lane of identical length on Stockton Street. The proposed change is in keeping with the goals and scope of the Colored Lanes project, and the expected benefits significantly exceed the previously planned corridor. Further detail is available in Attachment C. Staff recommends approving SFMTA's request for a minor scope modification on this portion of the Colored Lanes project. Because the project title will remain the same, no changes are required to the original project programming in MTC Resolution No. 4035, Revised.

Reinvestment of Project Savings in Corridors

Three additional scope changes have been requested by project sponsors, all under the TPI savings policy or allowable in the scope of the project, and therefore may be approved at the staff level. The TPI savings policy, as approved by the Commission in MTC Resolution No. 4273, Revised, allows project savings to be used to "expand the scope of the project, if the expanded scope provides additional quantifiable benefits to the original transit corridor". Requests from SFMTA, LAVTA, and VTA totaling approximately \$475,000 have been

reviewed and approved by staff and are provided here as part of the informational semi-annual update. Additional information is provided in Attachment C.

Issues: None

Recommendation: Receive the TPI Investment Program Semi-Annual Report as an information item and refer the SFMTA Colored Lanes minor scope modification request to the Commission for approval.

Attachments: Attachment A: Summary of TPI Investment Project by Round
Attachment B: TPI Investment Program Project Updates Presentation Slides
Attachment C: Detail on Minor Scope Modification Request and Reinvestments of Project Savings



Therese W. McMillan

Transit Performance Initiative - Investment Program Projects by Round (\$ in millions)

1st Round (Approved May 2012)

Agency	Project	TPI Award (\$ millions)
AC Transit	Line 51 Corridor Delay Reduction & Sustainability Project <i>Complete</i>	\$10.5
San Francisco Municipal Transportation Authority (SFMTA)	Mission Customer First <i>Substantially Complete</i>	\$5.4
	N-Judah Customer First* <i>Substantially Complete</i>	\$2.4
	Colored Lanes on MTA Rapid Network*	\$3.0
	Bus Stop Consolidation and Roadway Modification (9-San Bruno)** <i>Complete</i>	\$4.1
	Light Rail Transit Signal Priority Improvements	\$1.6
Santa Clara Valley Transportation Authority (SCVTA)	Stevens Creek — Limited 323 Transit Signal Priority <i>Complete</i>	\$0.7
Total		\$27.7

*In July 2015, MTC approved reprogramming of \$3 million from the SFMTA Round 1 N-Judah Customer First project to the Colored Lanes on MTA Rapid Network project

**Scope determined Sept. 2014. Project is reporting with Round 2 projects

2nd Round (Approved September 2014)

Agency	Project	TPI Award (\$ millions)
Various – Small Operators	Clipper Phase 3 Implementation <i>Complete</i>	\$8.0
Santa Clara Valley Transportation Authority (SCVTA)	Mountain View Double Track Improvements – Phase 1 <i>Complete</i>	\$8.0
City of Dublin/ Livermore Amador Valley Transit Authority (LAVTA)	Dublin Boulevard Transit Performance Initiative <i>Complete</i>	\$1.0
AC Transit	South Alameda County Major Corridors Travel Time Improvement <i>Complete</i>	\$5.0
San Francisco Municipal Transportation Authority (SFMTA)*	Colored Lanes on MTA Rapid Network	\$1.0
	Geary BRT Phase 1	\$4.0
Total		\$27.0

*In January 2017, MTC approved reprogramming \$4 million from the SFMTA Round 2 Colored Lanes and Muni Forward projects to Geary BRT Phase 1, which was also awarded TPI Round 3 funds.

3rd Round (Approved January 2017)

Agency	Project	TPI Amount (\$ millions)
Various	Bay Bridge Forward	\$10.0
SFMTA	Geary BRT Phase 1	\$5.6
SamTrans	Traffic Signal Priority on El Camino Real	\$3.5
BART	Train Seat Modification Project <i>Complete</i>	\$1.5
AC Transit*	San Pablo and Telegraph Rapid Bus Upgrades Project	\$5.0
VTA	Santa Clara Light Rail Crossovers and Switches	\$0.5
Total		\$26.1

*AC Transit received a total of \$5M in combined federal STP/CMAQ funds and state Cap and Trade LCTOP funds.

4th Round - North Bay (Approved July 2017)

County	Project	TPI Amount (\$ millions)
Marin	Novato Downtown SMART Station	\$0.5
Sonoma	Santa Rosa CityBus New Transit System Optimization	\$0.4
Napa	NVTA Imola Ave and SR-29 Express Bus Improvements	\$0.4
Solano	SolanoExpress Fairgrounds Drive/SR-37 Bus Stop <i>Complete</i>	\$1.0
Total		\$2.3

**Transit Performance Initiative - Investment Program
Projects by Round (\$ in millions)**

Low Carbon Transit Operations Program FY 2017-18 (Approved March 2018)

Agency	Project	TPI Amount (\$ millions)
SFMTA	Mission Bay Loop	\$1.4
VTA	North First Street Light Rail Speed and Safety Improvements Project - Phase 1	\$0.9
AC Transit	San Leandro BART -- Transit Access Improvements	\$0.6
AC Transit	South Alameda County Major Corridors Travel Time Improvement Project <i>Complete</i>	\$0.2
Total		\$3.1

Low Carbon Transit Operations Program FY 2018-19 (Approved April 2019)

Agency	Project	TPI Amount (\$ millions)
SFMTA	West Portal Optimization and Crossover Activation	\$2.2
VTA	2021 Zero Emission Bus Procurement*	\$1.3
AC Transit	Dumbarton Innovative Deployments to Enhance Arterials (IDEA)	\$1.2
Total		\$4.7

*This project is not considered eligible for the TPI category but will count toward VTA's minimum set-aside. VTA is expected to commit a like amount of a local funds to a TPI project. Staff will follow up on this commitment through semi-annual TPI updates to the Commission.

TPI Program Grand Total	\$90.9
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Agenda Item 2f – Attachment B
Programming & Allocations Committee
December 11, 2019

Transit Performance Initiative – Investment Program Project Updates



Fairgrounds/SR-37 Bus Stop

TPI Investment Program Summary

- \$91 million (federal STP/CMAQ funds and Cap and Trade LCTOP program)
- Round 1 and 2 projects either complete or entering/under construction
- Round 3 and 4 projects either in design or entering construction
- Future funding through OBAG 2 program



TPI Investment Projects

3

AC Transit	TPI Award (\$ millions)
Line 51 Corridor Delay Reduction & Sustainability Project <i>Complete</i>	\$10.5
South Alameda County Major Corridors Travel Time Improvement <i>Complete</i>	\$5.2
San Pablo and Telegraph Rapid Bus Upgrades Project	\$5.0
San Leandro BART -- Transit Access Improvements	\$0.6
Dumbarton Innovative Deployments to Enhance Arterials (IDEA)	\$1.2
Subtotal AC Transit Awards	\$22.5
Bay Bridge Forward (AC Transit Double Deckers + Bus Wash + West Grand TSP)	\$10.0
Total AC Transit	\$32.5
SFMTA	TPI Award (\$ millions)
Mission Customer First <i>Substantially Complete</i>	\$5.4
N-Judah Customer First <i>Substantially Complete</i>	\$2.4
Bus Stop Consolidation and Roadway Modification (9-San Bruno) <i>Complete</i>	\$4.1
Colored Lanes on MTA Rapid Network	\$4.0
Geary BRT Phase 1	\$9.6
Mission Bay Loop	\$1.4
West Portal Optimization and Crossover Activation	\$2.2
Total SFMTA	\$29.1



TPI Investment Projects

VTA	TPI Award (\$ millions)
Light Rail Transit Signal Priority Improvements	\$1.6
Stevens Creek — Limited 323 Transit Signal Priority <i>Complete</i>	\$0.7
Mountain View Double Track Improvements – Phase 1 <i>Complete</i>	\$8.0
Santa Clara Light Rail Crossovers and Switches <i>(reprogrammed)</i>	\$0.5
North First Street Light Rail Speed and Safety Improvements Project - Phase 1	\$0.9
2021 Zero Emission Bus Procurement* (To be substituted with alternate project)	\$1.3
Total VTA	\$13.0
Other Operators/Projects	TPI Award (\$ millions)
LAVTA/Dublin — Dublin Boulevard Transit Performance Initiative <i>Complete</i>	\$1.0
SamTrans — Traffic Signal Priority on El Camino Real	\$3.5
BART — Train Seat Modification Project <i>Complete</i>	\$1.5
Novato — Downtown SMART Station	\$0.5
Santa Rosa CityBus — New Transit System Optimization	\$0.4
NVTA — Imola Ave and SR-29 Express Bus Improvements	\$0.4
SolanoExpress — Fairgrounds Drive/SR-37 Bus Stop <i>Complete</i>	\$1.0
Clipper — Phase 3 Implementation <i>Complete</i>	\$8.0
Total Other	\$16.3

*This project is not considered eligible for the TPI category but will count toward VTA's minimum set-aside. VTA is expected to commit a like amount of a local funds to a TPI project. Staff will follow up on this commitment through semi-annual TPI updates to the Commission.

1st Round Project Updates



14-Mission

- Installation of info panels is complete
- Stop branding was delayed for additional accessibility review, but is now moving forward again
- Bus branding design issues expected to be resolved soon, implementation will begin next year

N-Judah

- TSP, lane colorization, camera elements complete
- Stop branding was delayed for additional accessibility review, but is now moving forward again

9-San Bruno

- Project is complete, savings are being evaluated and could be used for further improvements on the corridor



Light Rail TSP

- Agreements with Cities of Santa Clara and San José for local implementation of TSP continued to be delayed, holding up project progress.
 - Santa Clara agreement is moving forward and is expected to be finalized by the end of 2019
 - San José agreement is held up over concerns about the planned technology
- Currently developing TSP parameters to be tested in Sunnyvale by the end of 2020
- Equipment has been manufactured and shipped



SFMTA 9-San Bruno

2nd Round Project Updates

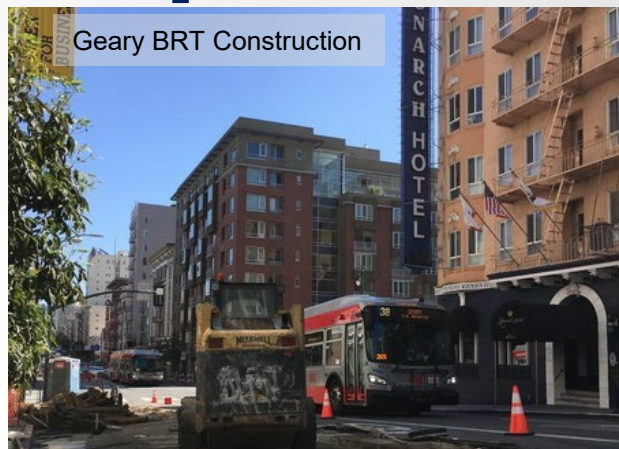


Geary Rapid Project Phase 1

- Initial implementation resulted in 1-2 minutes of peak hour transit travel time savings
- First two construction contracts underway and on schedule
- Steiner bridge demolition and West of Van Ness construction bids came in under estimate; procurement slightly delayed due to ATU labor lawsuit, work expected to begin early 2020
- Colorization of transit lanes is being deferred until repaving is complete in 2021

Colored Lanes on Rapid Network

- Fremont St, Clay St, and additional lanes near Transbay Terminal completed
- Fourth St anticipated to be complete in 2019



Line 97/South Alameda

- Project close-out was completed in the summer
- Leveraged additional funding to deliver full scope of original request, extending from Bayfair Station to Union City
- The after-study found:
 - Northbound travel times decreased by 12% overall and 17% in the PM peak
 - The percentage of vehicles that arrived on green (and therefore did not need to stop) increased by 7% to 11%, depending on time of day and travel direction

3rd Round Project Updates



El Camino Real TSP

- Final design is completed and installation contract awarded
- Pilot installations currently underway and complete installations are expected to begin late 2019 or early 2020.



Light Rail Crossovers and Switches Project

- \$500k reprogrammed by MTC and incorporated into TIP, fully executed grant from FTA expected Spring 2020 at earliest



Bay Bridge Forward

- **West Grand TSP** – 35% design is nearly complete pending the cities' approval, outreach along the corridors has been initiated
- **Double-Decker Bus Wash** – Design of the project is complete and bids on the project are under evaluation. The contract is expected to be approved by the AC Transit Board in November, and project completion is planned by the end of 2020.



AC Transit San Pablo/Telegraph

- Both corridors currently in design and construction management contracts have been awarded
- Telegraph Avenue expected to complete design in Spring 2020 with construction starting late 2020
- San Pablo Avenue design is expected to be complete in early 2020, with construction complete as early as summer 2020.

4th Round (North Bay)

Project Updates



Santa Rosa CityBus New Transit System Optimization

- 4G installation and electrical work for kiosks will occur in November 2019
- Design work for full installation of hubs underway
- Procurement for mobile ticketing, real time signage, and transit hubs underway
- All elements expected complete by June 2020

Novato Downtown SMART Station



Phase 2 (signaling, systems, station amenities)

- Major construction complete, contractor continues to install lighting and station amenities
- Project completion expected concurrent with opening of SMART Larkspur extension in late 2019

Phase 3 (former Depot site improvements)

- Agreement with developer/operator in-progress
- City is seeking funding for phase



Novato SMART Station Construction Progress

4th Round (North Bay) Project Updates



SolanoExpress Fairgrounds Drive/SR-37 Bus Stop

- Construction is complete and project is in-service
- New Red Line service started July 1, 2019, connecting three cities, four PDAs, and four regional transit systems
- In the first quarter of operation, there were approximately 200 average weekday boardings to the Red line at the Fairgrounds stop



Fairgrounds/SR-37 bus stop



NVTA Imola Ave and SR-29 Express Bus Improvements

- Design, engineering, and environmental contract awarded April 2019 and expected to be complete in summer 2020
- Construction groundbreaking could occur shortly after design completion, once funding secured

FY2017-18 and 2018-19 Low Carbon Transit Operations Program (LCTOP)



San Leandro BART Transit Access Improvements

- Construction underway, completion expected at the end of 2019 or shortly thereafter
- Transit center includes a bus island equipped for 4 BRT buses and designed for 5-min BRT headways

Dumbarton IDEA

- Design contract awarded in June, construction expected to start in Spring 2020 and last for six months
- Portions of the corridor improvements will be completed by MTC (under the Dumbarton Forward project) and private partners (Facebook and Stanford)



San Leandro Transit Center
Construction Progress



Mission Bay Loop

- Construction is complete on most project elements
- Completion date delayed to end of 2019

West Portal Optimization and Crossover Activation

- Planning complete and construction initiated
- Expected complete in mid-2021



North First Street Light Rail Speed and Safety Improvements

- Design still in progress
- ### TBD project to substitute for Zero Emission Bus Purchase 2021

- MTC is working with VTA to identify an eligible replacement project, which will be reported starting next semi-annual update

Scope Modification and Savings Policy Requests

Minor scope modification request (requires commission approval): SFMTA Colored Lanes

- SFMTA has requested scope modification from West Portal Avenue to Stockton Avenue
 - No problems with non-colored transit lane compliance on West Portal Ave
 - Coloring lane expected to reduce violations by 45% to 55% on Stockton
 - Stockton Ave is same length and cost (\$250,100); serves 72,000 weekday riders

Savings Requests (reviewed and approved by staff)

- **SFMTA Colored Lanes**
 - Request to extend Fourth St colorization an additional block from Howard to Folsom Street
 - Utilize \$111,725 in savings achieved through lower-than-expected costs on previous work
- **LAVTA Dublin Boulevard**
 - Request to expand the TSP system to more intersections and update the GPS technology
 - Improve on-time performance and enable monitoring and adjustment of the system
 - \$305,000 in savings achieved by utilizing a cheaper technology for customer interface
- **VTA 323 Stevens Creek**
 - Request to add a central monitoring system for the previously installed TSP
 - Maintain travel time savings achieved by the original project
 - Utilize use up to \$60,000 in savings from the original project



Detail on Minor Scope Modification Request and Reinvestments of Project Savings

This attachment provides detail of the Transit Performance Initiative (TPI) Capital Investment Program project scope change and project saving reinvestment requests received during this reporting period. The first request for a minor scope modification to the SFMTA Colored Lanes project requires commission approval. The remaining three requests have been reviewed and approved at the staff level per existing project scope or TPI savings policy and are provided as part of the informational semi-annual update.

SFMTA Colored Lanes Minor Scope Modification Request

The SFMTA Colored Lanes project planned to colorize existing transit lanes along several Muni rapid corridors. To-date, two of these corridors have been completed, as have additional lanes near the Transbay Transit Center added through project savings, and a third is planned for completion by the end of 2019. A fourth installation was planned for West Portal Avenue, but additional observation of traffic behavior on this corridor has found little to no violations in the existing transit lanes and colorization is not expected to result in a significant benefit to compliance or travel times. SFMTA is proposing a minor scope adjustment to change the planned colorization on West Portal Avenue to a segment of identical length on Stockton Street, between Bush and Market Streets. Because the segments are of identical length, the cost to colorize Stockton Street would be equivalent to the cost to colorize West Portal Avenue of \$250,100. SFMTA anticipates that colorizing Stockton Street will reduce violations in the lane by 45% to 55%. The transit-only lanes on Stockton Street serve lines 8, 8AX, 30, and 45, totaling 72,000 weekday riders – approximately the same ridership as West Portal Avenue, which serves 73,500 weekday riders on lines KT and M.

Summary of Reinvestments of Project Savings

The following requests for reinvestment of project savings to expand the scope of existing projects have been reviewed and approved by staff, as allowed either in the project scope or under the TPI savings policy. The policy allows for savings to be applied to additional improvements within the same project corridor without reprogramming to a new project. Details are provided here as part of the informational semi-annual update, and summarized in the table below

Project Title	Original TPI Amount	Savings Amount
SFMTA Colored Lanes	\$1,000,000	\$111,725
LAVTA Dublin Boulevard	\$1,000,000	\$305,000
VTA Limited 323 TSP	\$712,888	\$60,000

SFMTA Colored Lanes – Fourth Street Extension

SFMTA is planning to extend the existing 24/7 transit-only lanes on Fourth Street an additional block south from Howard to Folsom St. The TPI Colored Lanes project includes colorization on Fourth Street from Market to Howard, planned to be completed by the end of 2019. SFMTA is requesting to extend the colored lanes to include the additional block of transit-only lane. This addition would cost \$111,725 and could be accommodated in the project savings achieved due to lower than expected costs to install the colorized lanes. The Colored Lanes project scope as originally awarded allows for additional locations to be colorized as funds permit.

LAVTA Dublin Boulevard – TSP Upgrade and Expansion

In the second competitive round of the TPI investment program, \$1 million was awarded to the Dublin Boulevard Transit Performance Initiative Project, which planned to acquire and install signal control technology at 27 intersections on the Dublin Boulevard corridor along with other corridor upgrades and an updated customer interface portal. The signal work was completed, and savings on this project were achieved by utilizing a phone app rather than developing a more expensive information portal. LAVTA is proposing to use approximately \$305,000 in savings for a related project to upgrade GPS technology and expand the existing TSP system on Dublin Boulevard. The new technology will increase the number of intersections with TSP and provide LAVTA with real-time information about TSP utilization. The project will improve on-time performance of the rapid routes on Dublin Boulevard and allow LAVTA to monitor the performance of the system and make adjustments to optimize it. This request falls under the TPI savings policy.

VTA Limited 323 Transit Signal Priority Project – Central Monitoring System

In the first competitive round of the TPI investment program, \$712,888 was awarded to the VTA Stevens Creek – Limited 323 Transit Signal Priority Project, which implemented transit signal priority (TSP) on West San Carlos Street and Stevens Creek Boulevard for the Limited Route 323. The project improved overall travel times by approximately two minutes. VTA proposes to apply up to \$60,000 in savings to procure networking equipment for a TSP central monitoring system. The system will monitor and proactively address any issues within the system in a timely manner. In order to maintain the travel time savings achieved by the TSP project, VTA is continually adjusting the schedule along the route to avoid bus bunching, requiring the TSP equipment to be always online and in working order. The monitoring system will allow staff to quickly identify faults in the system, including the notification of appropriate staff to take corrective actions to keep the buses and TSP equipment operating and on schedule. This request falls under the TPI savings policy.