



RESOLUTION ALLOCATING \$26,147,587 AND APPROPRIATING \$100,000 IN PROP K SALES TAX FUNDS FOR TWELVE REQUESTS, WITH CONDITIONS

WHEREAS, The Transportation Authority received twelve requests for a total of \$26,247,587 in Prop K local transportation sales tax funds, as summarized in Attachments 1 and 2 and detailed in the enclosed allocation request forms; and

WHEREAS, The requests seek funds from the following Prop K Expenditure Plan categories: Other Transit Enhancements, Vehicles - Muni, Street Repair and Cleaning Equipment, Pedestrian and Bicycle Facility Maintenance, Street Resurfacing, Traffic Calming, Tree Planting and Maintenance, and Transportation/ Land Use Coordination; and

WHEREAS, As required by the voter-approved Expenditure Plans, the Transportation Authority Board has adopted a Prop K 5-Year Prioritization Program (5YPP) for each of the aforementioned Expenditure Plan programmatic categories; and

WHEREAS, Eight of the twelve requests are consistent with the relevant Prop K Strategic plan and the 5YPPs for their respective categories; and

WHEREAS, The San Francisco Municipal Transportation Agency's (SFMTA's) request for Muni Subway Expansion Project Development requires a concurrent Prop K Strategic Plan amendment to advance \$965,948 from Fiscal Year 2020/21 to Fiscal Year 2019/20, and a corresponding amendment to the Other Transit Enhancements 5YPP; and

WHEREAS, The requested Strategic Plan amendment would result in a negligible increase (0.0014%) to the assumed level of financing costs for the Prop K program; and

WHEREAS, The SFMTA's requests for New Flyer Midlife Overhaul - Phase 1, Application-Based Traffic Calming Program - FY18/19 Cycle Implementation, and Application-Based Traffic Calming Program - FY19/20 Cycle Planning require 5YPP amendments as summarized in Attachment 2 and detailed in the enclosed allocation request forms; and

WHEREAS, After reviewing the requests, Transportation Authority staff recommended



allocating \$26,147,587 and appropriating \$100,000 in Prop K funds, with conditions, for twelve projects, as described in Attachment 3 and detailed in the enclosed allocation request forms, which include staff recommendations for Prop K allocation amounts, required deliverables, timely use of funds requirements, special conditions, and Fiscal Year Cash Flow Distribution Schedules; and

WHEREAS, There are sufficient funds in the Capital Expenditures line item of the Transportation Authority's approved Fiscal Year 2019/20 budget to cover the proposed actions; and

WHEREAS, At its September 4, 2019 meeting, the Citizens Advisory Committee was briefed on the subject request and unanimously adopted a motion of support for the staff recommendation; and

RESOLVED, That the Transportation Authority hereby amends the 2019 Prop K Strategic Plan to advance \$965,948 from Fiscal Year 2020/21 to Fiscal Year 2019/20 in the Other Transit Enhancements category as detailed in the enclosed allocation request form; and be it further

RESOLVED, That the Transportation Authority hereby amends the Prop K Other Transit Enhancements, Vehicles - Muni, and Traffic Calming 5YPPs, as detailed in the enclosed allocation request forms; and be it further

RESOLVED, That the Transportation Authority hereby allocates \$26,147,587 and appropriates \$100,000 in Prop K Sales Tax Funds for twelve requests, with conditions, as summarized in Attachment 3 and detailed in the enclosed allocation request forms; and be it further

RESOLVED, That the Transportation Authority finds the allocation of these funds to be in conformance with the priorities, policies, funding levels, and prioritization methodologies established in the Prop K Expenditure Plan, the Prop K Strategic Plan and the relevant 5YPPs; and be it further

RESOLVED, That the Transportation Authority hereby authorizes the actual expenditure



(cash reimbursement) of funds for these activities to take place subject to the Fiscal Year Cash Flow Distribution Schedules detailed in the enclosed allocation request forms; and be it further

RESOLVED, That the Capital Expenditures line item for subsequent fiscal year annual budgets shall reflect the maximum reimbursement schedule amounts adopted and the Transportation Authority does not guarantee reimbursement levels higher than those adopted; and be it further

RESOLVED, That as a condition of this authorization for expenditure, the Executive Director shall impose such terms and conditions as are necessary for the project sponsors to comply with applicable law and adopted Transportation Authority policies and execute Standard Grant Agreements to that effect; and be it further

RESOLVED, That as a condition of this authorization for expenditure, the project sponsors shall provide the Transportation Authority with any other information it may request regarding the use of the funds hereby authorized; and be it further

RESOLVED, That the Capital Improvement Program of the Congestion Management Program, the Prop K Strategic Plan and the relevant 5YPPs are hereby amended, as appropriate.

Attachments:

1. Summary of Requests Received
2. Brief Project Descriptions
3. Staff Recommendations
4. Prop K Allocation Summary - FY 2019/20

Enclosure:

Prop K/Prop AA Allocation Request Forms (12)

Attachment 1: Summary of Requests Received

						Leveraging			
Source	EP Line No./ Category ¹	Project Sponsor ²	Project Name	Current Prop K Request	Total Cost for Requested Phase(s)	Expected Leveraging by EP Line ³	Actual Leveraging by Project Phase(s) ⁴	Phase(s) Requested	District(s)
Prop K	16	SFMTA	Muni Subway Expansion Project Development	\$ 965,948	\$ 965,948	74%	0%; significant leveraging expected in future phases	Planning	7
Prop K	17M	SFMTA	New Flyer Midlife Overhaul - Phase 1	\$ 17,937,483	\$ 172,169,772	84%	90%	Construction	Citywide
Prop K	35	SFPW	Street Repair and Cleaning Equipment	\$ 1,300,000	\$ 1,300,000	29%	0%	Construction	Citywide
Prop K	37	SFPW	Public Sidewalk and Curb Repair	\$ 552,659	\$ 795,743	79%	31%	Construction	Citywide
Prop K	38	SFMTA	Speed Radar Sign Installation Program	\$ 178,820	\$ 213,820	51%	16%	Planning, Construction	Citywide
Prop K	38	SFMTA	Application-Based Traffic Calming Program - FY18/19 Cycle Implementation	\$ 1,253,103	\$ 1,253,103	51%	0%	Design, Construction	Citywide
Prop K	38	SFMTA	Application-Based Traffic Calming Program - FY19/20 Cycle Planning	\$ 203,192	\$ 203,192	51%	0%	Planning	Citywide
Prop K	38	SFMTA	Safer Taylor Street	\$ 2,047,958	\$ 2,047,958	51%	0%; significant constructure phase leveraging expected	Design	3, 6
Prop K	38, 39	SFMTA	Safe Streets Evaluation Program	\$ 200,000	\$ 200,000	41%	0%	Planning	Citywide
Prop K	42	SFPW	Tree Planting and Establishment	\$ 1,408,424	\$ 1,408,424	57%	0%	Construction	Citywide
Prop K	44	SFCTA	District 4 Mobility Improvements Study [NTIP Planning]	\$ 100,000	\$ 130,000	40%	23%	Planning	4
Prop K	44	SFMTA	Alemaný Corridor Safety [NTIP Planning]	\$ 100,000	\$ 100,000	40%	0%	Planning	11
TOTAL				\$ 26,247,587	\$ 180,787,960	82%	85%		

Attachment 1: Summary of Requests Received

Footnotes

- ¹ "EP Line No./Category" is either the Prop K Expenditure Plan line number referenced in the 2019 Prop K Strategic Plan or the Prop AA Expenditure Plan category referenced in the 2017 Prop AA Strategic Plan, including: Street Repair and Reconstruction (Street), Pedestrian Safety (Ped), and Transit Reliability and Mobility Improvements (Transit).
- ² Acronyms: SFCTA (San Francisco County Transportation Authority); SFMTA (San Francisco Municipal Transportation Agency); SFPW (San Francisco Public Works)
- ³ "Expected Leveraging By EP Line" is calculated by dividing the total non-Prop K funds expected to be available for a given Prop K Expenditure Plan line item (e.g. Pedestrian Circulation and Safety) by the total expected funding for that Prop K Expenditure Plan line item over the 30-year Expenditure Plan period. For example, expected leveraging of 90% indicates that on average non-Prop K funds should cover 90% of the total costs for all projects in that category, and Prop K should cover only 10%.
- ⁴ "Actual Leveraging by Project Phase" is calculated by dividing the total non-Prop K or non-Prop AA funds in the funding plan by the total cost for the requested phase or phases. If the percentage in the "Actual Leveraging" column is lower than in the "Expected Leveraging" column, the request (indicated by yellow highlighting) is leveraging fewer non-Prop K dollars than assumed in the Expenditure Plan. A project that is well leveraged overall may have lower-than-expected leveraging for an individual or partial phase.

Attachment 2: Brief Project Descriptions ¹

EP Line No./ Category	Project Sponsor	Project Name	Prop K Funds Requested	Project Description
16	SFMTA	Muni Subway Expansion Project Development	\$965,948	<p>The Muni Subway Expansion Project would construct a new light rail tunnel between West Portal and Parkmerced to improve the Muni Metro's speed, reliability and capacity. It would also re-design 19th Avenue between Eucalyptus and Brotherhood Way with wider sidewalks, a bike path separated from traffic, and new trees and landscaping. Requested funds would fund the development of conceptual alignments and planning level cost estimates for undergrounding the K- and M-lines within the Twin Peaks tunnel such that these lines can proceed underground under West Portal Avenue. SFMTA expects to complete the final report by March 2021.</p> <p>The SFMTA-led SF Transit Corridors Study (TCS), which is part of the multi-agency ConnectSF long range transportation planning program, is in the process of identifying and prioritizing the next generation of major transit capital projects. The work funded by this request will produce planning level information to evaluate investment options for the TCS. The Muni Subway Expansion Project would await clarification on prioritization via the TCS prior to its next major phase of work: environmental review.</p>
17M	SFMTA	New Flyer Midlife Overhaul - Phase 1	\$17,937,483	<p>Perform scheduled midlife overhauls, in accordance with manufacturer recommendations, on a portion of the New Flyer fleet (813 40-foot and 60-foot motor coaches and trolley coaches). Midlife overhauls significantly improve vehicle reliability, reduce the incidence of breakdowns, and prevent service interruptions with additional costly repairs. Phase 1 of the overhaul program will address the oldest vehicles in the fleet and include substantial work to 271 motor coaches and 60 trolley coaches procured between 2013 and 2016. Work will also include cosmetic improvements like repainting exteriors, updating seating configurations, and improving wheelchair passenger securements. SFMTA expects to complete Phase 1 by September 2024.</p>

Attachment 2: Brief Project Descriptions ¹

EP Line No./ Category	Project Sponsor	Project Name	Prop K Funds Requested	Project Description
35	SFPW	Street Repair and Cleaning Equipment	\$1,300,000	Funds will be used to purchase 13 pieces of street repair and cleaning equipment that have reached the end of their useful lives, including 2 mechanical street sweepers, 6 one-ton pickup trucks with dump beds, and 5 half-ton pickup trucks. SFPW expects all 13 pieces of equipment to be in service by December 2021.
37	SFPW	Public Sidewalk and Curb Repair	\$552,659	SFPW is responsible for repairing sidewalks around City-maintained trees, adjacent to City properties, and at the angular returns of all intersections. Requested funds will be used to repair non tree-related damage to public sidewalks, curb and gutters, and angular returns at approximately 633 locations. A portion of the Tree Maintenance Fund established by Prop E (2016) will be used to repair sidewalks damaged by City-maintained trees. SFPW expects all repairs funded by this request to be done by September 2020. Members of the public can request sidewalk repairs by calling 311.
38	SFMTA	Speed Radar Sign Installation Program	\$178,820	Identify locations and then install four or five speed radar signs, based on community and SFMTA staff requests. Speed radar signs are electronic signs that have a built-in radar gun pointing at oncoming cars. The sign displays the speed of the oncoming car and can be effective at reducing vehicle travel speeds when installed in an appropriate location, per SFMTA Speed Radar Sign Guidelines. Locations will be ranked by criteria including traffic speeds, average daily traffic level, proximity to schools or senior centers, number of travel lanes, no other planned improvements at the location, and collision history. SFMTA expects that all of the signs will be open for use by March 2021.
38	SFMTA	Application-Based Traffic Calming Program - FY18/19 Cycle Implementation	\$1,253,103	Design and construct 54 traffic calming projects on residential streets as identified, evaluated and ranked through the program's Fiscal Year 2018/19 cycle (applications were due in June 2018). See pg. 110 of enclosure for lists of requested and approved locations. The projects involve approximately 108 individual traffic calming measures, including speed humps, speed cushions, traffic islands and raised crosswalks. SFMTA expects all traffic calming measures to be open for use by December 2021.

Attachment 2: Brief Project Descriptions ¹

EP Line No./ Category	Project Sponsor	Project Name	Prop K Funds Requested	Project Description
38	SFMTA	Application-Based Traffic Calming Program - FY19/20 Cycle Planning	\$203,192	Citywide program outreach, evaluation and prioritization of all eligible applications received by June 30, 2019 for traffic calming on residential streets. See pgs. 136-137 of enclosure for lists of requested locations. Scope includes recommendations for traffic calming measures, balloting and targeted community outreach where needed, and conceptual engineering of traffic calming measures at approximately 50 locations. SFMTA expects selection and preliminary engineering to be done by September 2020. SFMTA will request future Prop K funds for the design and construction phases, with projects open for use by September 2022.
38	SFMTA	Safer Taylor Street	\$2,047,958	The requested funds will be used for the design phase for transportation safety and livability improvements on Taylor Street between Market Street and Sutter Street. Project scope includes widening sidewalks from Turk to Ellis, reducing travel lanes from Market to Sutter, upgrading signals, and other pedestrian safety improvements. SFMTA expects to complete design by June 2020, and anticipates that the project will be open for use by September 2022.
38, 39	SFMTA	Safe Streets Evaluation Program	\$200,000	Requested funds will be used to support pre- and post-implementation data collection efforts and analysis of 15 to 20 bicycle, pedestrian, and traffic calming projects over the next 18 months in support of Vision Zero. The evaluation program provides evidence-based recommendations to inform future projects by analyzing how upgraded street designs impact safety and comfort for all road users. SFMTA will continue to provide regular evaluation updates to the Vision Zero Committee. See page 154 of the enclosure for the list of projects to be evaluated. SFMTA expects to complete the final report by Spring 2021.
42	SFPW	Tree Planting and Establishment	\$1,408,424	SFPW and its community partners will plant approximately 691 trees and water them regularly for three years to ensure successful establishment. Once established, these trees will be maintained with funds from an annual General Fund setaside (Prop E, 2016). To identify priority planting sites, SFPW will use data from the comprehensive street tree census, which identified all street trees in the public right-of-way as well as existing empty basins and potential new planting sites, and will focus on areas with the greatest number of existing empty tree wells and the lowest canopy coverage. Plantings will be complete by June 2020. Members of the public can request a tree planting by calling 311.

Attachment 2: Brief Project Descriptions ¹

EP Line No./ Category	Project Sponsor	Project Name	Prop K Funds Requested	Project Description
44	SFCTA	District 4 Mobility Improvements Study [NTIP Planning]	\$100,000	At the request of Commissioner Mar, the Transportation Authority, in partnership with SFMTA, will conduct a study to understand the travel profile and patterns of District 4 residents, identify travel markets with high shares of single-occupancy vehicle (SOVs) trips, and explore short and medium-term strategies to reduce trips by SOVs. We expect to complete the final report by September 2020.
44	SFMTA	Alemaný Corridor Safety [NTIP Planning]	\$100,000	At the request of Commissioner Safai, SFMTA has requested Prop K funds to develop recommendations and conceptual designs for safety and accessibility improvements for Alemaný Boulevard between Sickles Avenue to the south and Mission Street to the north, segments of which are located on the High Injury Network. The focus of the project is to identify collision hot spots and recommend near- and medium-term collision countermeasures. The project includes community outreach to inform and confirm the needs assessment and to collect feedback on design proposals. The SFMTA expects to present the final report - including key findings, recommendations, next steps, and a funding strategy to the Transportation Authority Board for adoption by September 2020.
TOTAL			\$26,247,587	

¹ See Attachment 1 for footnotes.

Attachment 3: Staff Recommendations ¹

EP Line No./ Category	Project Sponsor	Project Name	Prop K Funds Recommended	Recommendations
16	SFMTA	Muni Subway Expansion Project Development	\$ 965,948	Prop K Strategic Plan and 5-Year Prioritization Program (5YPP) Amendments: The recommended allocation is contingent on concurrent amendments to the Prop K Strategic Plan and the Other Transit Enhancements 5YPP to advance \$965,948 of the \$2,744,300 programmed to the project in FY20/21 for allocation in FY19/20. See enclosed Strategic Plan and 5YPP amendments for details.
17M	SFMTA	New Flyer Midlife Overhaul - Phase 1	\$ 17,937,483	5YPP Amendment: The recommended allocation is contingent on an amendment to the Vehicles-Muni 5YPP to reprogram \$13,446,287 from the Replace 30 30-foot Hybrid Diesel Motor Coaches to the subject project. The replacement project has been deferred by at least two years. See enclosed 5YPP amendment for details.
35	SFPW	Street Repair and Cleaning Equipment	\$ 1,300,000	
37	SFPW	Public Sidewalk and Curb Repair	\$ 552,659	
38	SFMTA	Speed Radar Sign Installation Program	\$ 178,820	Multi-phase Allocation: Recommendation is for a multi-phase allocation given the straightforward nature of the scope and the short duration of each phase. Upon project completion, SFMTA will provide an evaluation of the effectiveness of these speed radar signs at reducing vehicle speeds based on before and after data.
38	SFMTA	Application-Based Traffic Calming Program - FY18/19 Cycle Implementation	\$ 1,253,103	5YPP Amendment: The recommended allocation is contingent on a concurrent amendment of the Traffic Calming 5YPP to reprogram \$53,103 in deobligated funds from projects completed under budget. See attached 5YPP amendment for details. Multi-phase allocation: Recommendation includes a multi-phase allocation given the straightforward nature of the scope and short duration of design and construction at each location.
38	SFMTA	Application-Based Traffic Calming Program - FY19/20 Cycle Planning	\$ 203,192	5YPP Amendment: The recommended allocation is contingent on a concurrent amendment of the Traffic Calming 5YPP to reprogram \$203,192 in deobligated funds from projects completed under budget. See attached 5YPP amendment for details.
38	SFMTA	Safer Taylor Street	\$ 2,047,958	

Attachment 3: Staff Recommendations ¹

EP Line No./ Category	Project Sponsor	Project Name	Prop K Funds Recommended	Recommendations
38, 39	SFMTA	Safe Streets Evaluation Program	\$ 200,000	
42	SFPW	Tree Planting and Establishment	\$ 1,408,424	
44	SFCTA	District 4 Mobility Improvements Study [NTIP Planning]	\$ 100,000	
44	SFMTA	Alemany Corridor Safety [NTIP Planning]	\$ 100,000	
TOTAL			\$26,247,587	

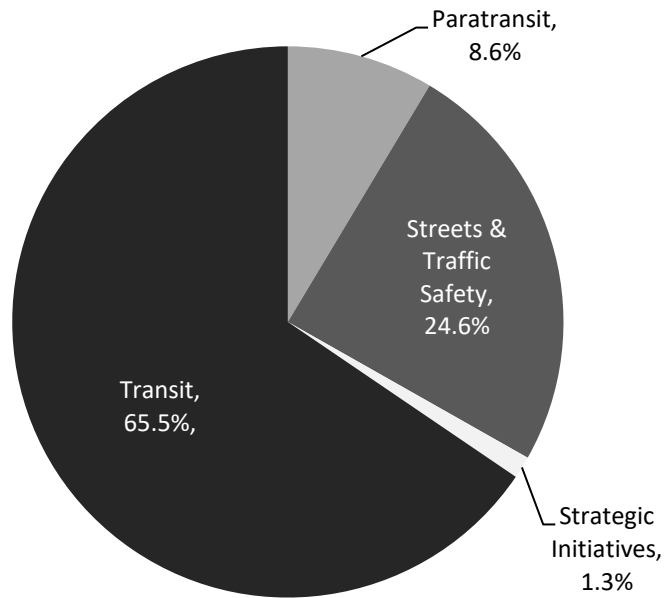
¹ See Attachment 1 for footnotes.

Attachment 4.
Prop K and Prop AA Allocation Summaries - FY 2019/20

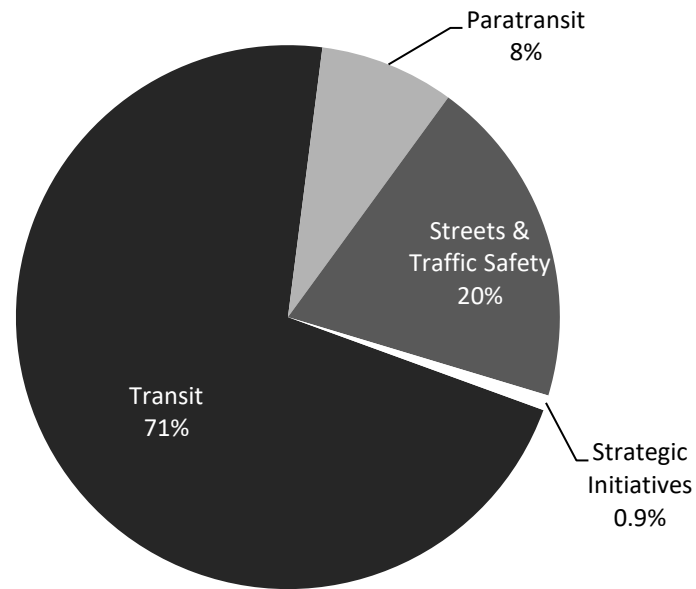
PROP K SALES TAX								
	Total	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26
Prior Allocations	\$ 17,663,374	\$ 7,919,536	\$9,013,838	\$730,000	\$ -	\$ -	\$ -	\$ -
Current Request(s)	\$ 25,530,087	\$ 7,049,296	\$ 6,413,201	\$ 3,995,724	\$ 2,690,622	\$ 2,690,622	\$ 2,690,622	\$ 717,500
New Total Allocations	\$ 43,193,461	\$ 14,968,832	\$ 15,427,039	\$ 4,725,724	\$ 2,690,622	\$ 2,690,622	\$ 2,690,622	\$ 717,500

The above table shows maximum annual cash flow for all FY 2019/20 allocations and appropriations approved to date, along with the current recommended allocation(s).

**Investment Commitments,
per Prop K Expenditure Plan**



Prop K Investments To Date





Memorandum

AGENDA ITEM 6

DATE: September 5, 2019
TO: Transportation Authority Board
FROM: Anna LaForte - Deputy Director for Policy and Programming
SUBJECT: 9/10/2019 Board Meeting: Allocate \$26,147,587, with Conditions, and Appropriate \$100,000 in Prop K Sales Tax Funds for Twelve Requests

RECOMMENDATION ☐ Information ☒ Action

Allocate \$22,886,504 in Prop K funds to the San Francisco Municipal Transportation Agency (SFMTA) for eight requests:

1. Muni Subway Expansion Project Development (\$965,948)
2. New Flyer Midlife Overhaul - Phase 1 (\$17,937,483)
3. Speed Radar Sign Installation Program (\$178,820)
4. Application-Based Traffic Calming Program - FY18/19 Cycle Implementation (\$1,253,103)
5. Application-Based Traffic Calming Program - FY19/20 Cycle Planning (\$203,192)
6. Safer Taylor Street (\$2,047,958)
7. Safe Streets Evaluation Program (\$200,000)
8. Alemany Corridor Safety [NTIP Planning] (\$100,000)

Allocate \$3,261,083 in Prop K funds to San Francisco Public Works (SFPW) for three requests:

9. Street Repair and Cleaning Equipment (\$1,300,000)
10. Public Sidewalk and Curb Repair (\$552,659)
11. Tree Planting and Establishment (\$1,408,424)

Appropriate \$100,000 in Prop K funds for one request:

12. District 4 Mobility Improvements Study [NTIP Planning]

SUMMARY

Attachment 1 lists the requests, including requested phase(s) and supervisorial district(s) for each project. Attachment 2 provides a brief description of each project. Attachment 3 contains the staff recommendations.

- ☒ Fund Allocation
- ☒ Fund Programming
- ☐ Policy/Legislation
- ☐ Plan/Study
- ☐ Capital Project Oversight/Delivery
- ☐ Budget/Finance
- ☐ Contract/Agreement
- ☐ Other: _____



DISCUSSION

Attachment 1 summarizes the subject allocation requests, including information on proposed leveraging (i.e. stretching Prop K sales tax dollars further by matching them with other fund sources) compared with the leveraging assumptions in the Prop K Expenditure Plan.

Attachment 2 includes a brief description of each project. Attachment 3 summarizes the staff recommendations for the requests, highlighting special conditions and other items of interest. An Allocation Request Form for each project is enclosed, with more detailed information on scope, schedule, budget, funding, deliverables and special conditions.

FINANCIAL IMPACT

The recommended action would allocate and appropriate \$26,247,587 in Prop K funds. The allocations and appropriation would be subject to the Fiscal Year Cash Flow Distribution Schedules contained in the enclosed Allocation Request Forms.

Attachment 4 shows the approved Fiscal Year 2019/20 allocations and appropriations to date, with associated annual cash flow commitments as well as the recommended allocations, appropriations, and cash flow amounts that are the subject of this memorandum.

Fully funding the SFMTA's request for Muni Subway Expansion Project Development requires a Prop K Strategic Plan amendment to advance \$965,948 in the Other Transit Enhancements category from Fiscal Year 2020/21 to Fiscal Year 2019/20. The amendment would result in a negligible increase of 0.0014% (\$38,047) in anticipated financing costs for the Prop K program as a whole over its 30-year life. See the enclosed allocation request form for the amendment details.

Sufficient funds are included in the Fiscal Year 2019/20 budget to accommodate the recommended actions. Furthermore, sufficient funds will be included in future budgets to cover the recommended cash flow distribution for those respective fiscal years.

CAC POSITION

The CAC was briefed on the subject requests at its September 4, 2019 meeting and unanimously approved a motion of support for the recommended allocations and appropriation. Based on CAC feedback, we have added a deliverable for a before/after evaluation of the effectiveness of speed radar signs proposed for installation as part of the SFMTA's Speed Radar Sign Installation Program.

SUPPLEMENTAL MATERIALS

- Attachment 1 – Summary of Requests Received
- Attachment 2 – Project Descriptions
- Attachment 3 – Staff Recommendations
- Attachment 4 – Prop K Allocation Summary – FY 2019/20



- Attachment 5 - SFMTA Mid-Life Overhaul Program Presentation
- Enclosure 1 - Allocation Request Forms (12)



Rubber Tire Mid-Life Overhaul Program



Transit | Fleet Engineering

SFCTA Board

September 10, 2019

Guiding Principles

- Maintain low average fleet age
- Improve reliability
- Adopt performance-based procurements
- Develop robust maintenance standards
- Align with City's sustainability goals
- Anticipate and accommodate growth
- Maintain 20% spare ratios



SFMTA
Municipal
Transportation
Agency

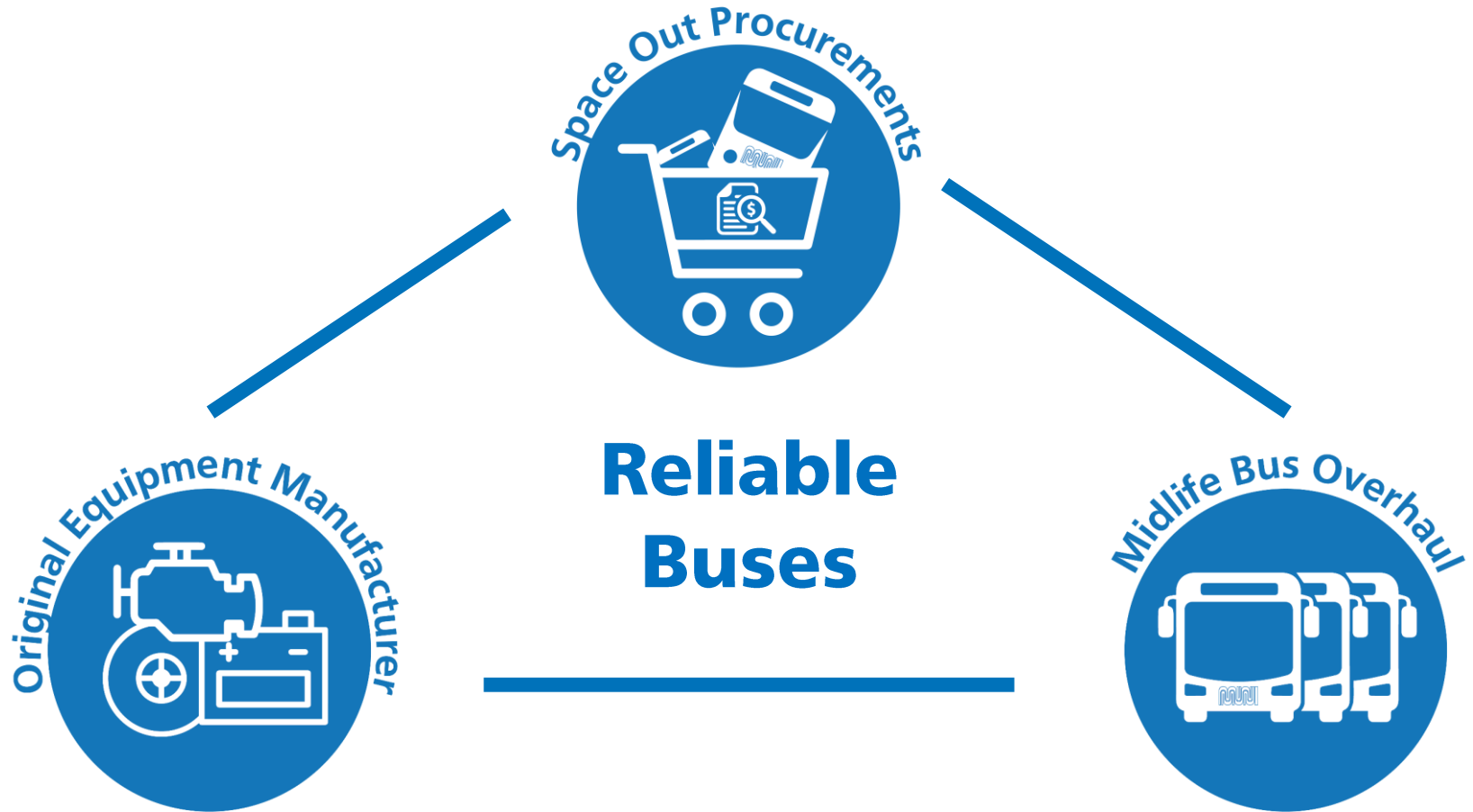
SFMTA Bus Fleet Management Plan

2017-2030



March 2017

Fleet Program Overview



Major fleet transition

Between 2013-2019 the SFMTA has successfully replaced 800+ motor coach and trolley coaches



- Increased number of articulated buses to relieve crowding on high-ridership lines
- Lowered fleet age to improve reliability
- Deployed new technology to reduce GHG emissions

Improved reliability means better service

Over the past 30 years, our expectations of the fleet's reliability have dramatically increased

1980s

2,000-3,000
miles

2000s

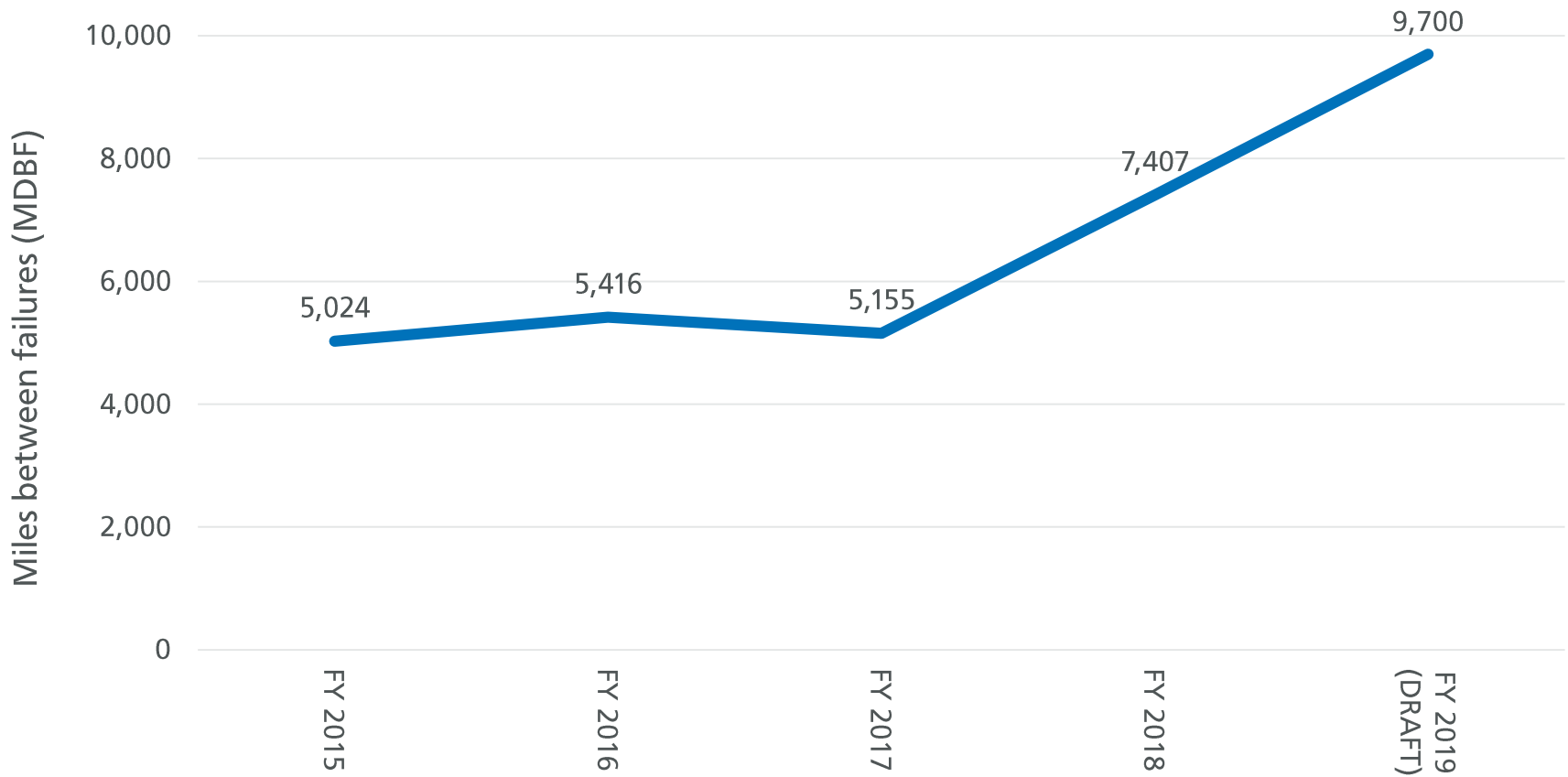
4,000-6,000
miles

Today

10,000-12,000
miles

Mean Distance Between Failures (MDBF) is the industry-standard measurement of vehicle reliability. It tracks how long a vehicle travels before a mechanical failure that results in lost service.

Fewer In-Service Bus Breakdowns



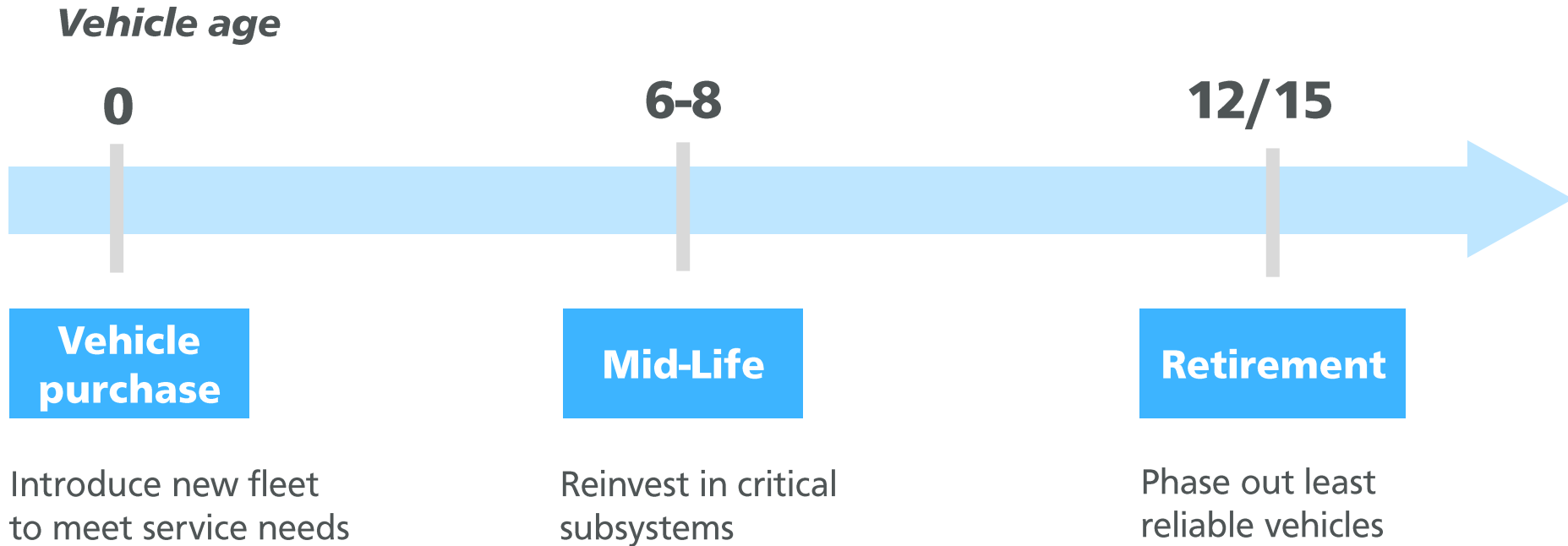
Continuous improvement

Over time we took in feedback from riders and staff to improve the vehicles:

- Added “three-point securements” at request of disability community to improve safety of wheelchair passengers
- Incorporated new rear-view mirror turn signals for safer operations around bicycles
- Increased capacity on bicycle racks from two to three bikes
- Updated interior design to include stroller standing area
- Deployed new digital radios with route and on-time performance data for operators
- Redesigned seating to improve comfort and reduce noise



Rubber Tire Vehicle Lifecycle



Mid Life Overhaul Program

- **Propulsion system overhaul** Increase reliability
- **ADA Equipment** Easy operation for wheelchair passengers, improved visibility for operators
- **Safety** Deploy collision warning indicators to the vehicles
- **Standardization** Update onboard technology to latest Agency standards
- **Technology Upgrade** Take advantage of technological progress
- **Comfort** Reduce noise, add ergonomic seats, improve seating layout

Previous Mid-Life: Neoplan



- Dramatically improved reliability: improved MDBF from 3,500 to 6,000
- Extended the life of the fleet, improve the comfort for passengers

Previous Mid-Life: Neoplans



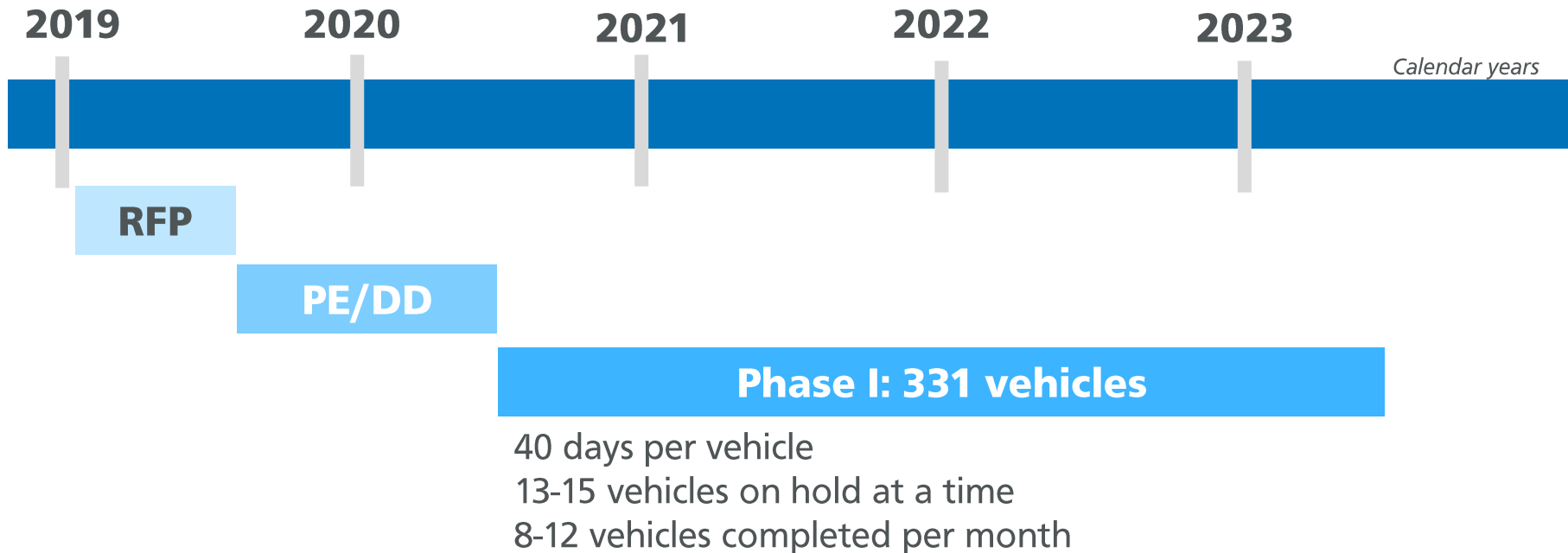
Cosmetic



Repaired structural wear



Program Delivery: New Flyer Mid-Life



Program Overview

The FTA requires a mid-life program for all federally-funded fleets and they provide funds for this work.

Phase I	Phase II	Phase III
331 vehicles	266 vehicles	218 vehicles
2020-2023	2022-2027	2025-2029
\$182,000,000	\$126,000,000	\$133,500,000

Ensuring fleet reliability, safety and comfort

