Metropolitan Transportation Commission
Programming and Allocations Committee

November 9, 2016   **Agenda Item 4a**

MTC Resolution No. 4249

Subject: Transportation Development Act (TDA) Triennial Audit report, Transit Sustainability Project (TSP) Performance report, and approval of the FY 2016-17 Productivity Improvement Program (PIP).

Background: **TDA Triennial Audits**

The Transportation Development Act (TDA) requires that MTC administer triennial performance audits of the region's transit operators. Operators are divided into three groups, with one group audited each year on a three-year cycle. The audits are conducted under contract by an independent auditing firm, currently Pierlott and Associates, LLC.

The attached presentation summarizes findings for the recently completed audits, focusing on each operator's three-year trends for certain performance indicators, including cost per hour, cost per passenger and passengers per hour. In summary, service effectiveness and cost efficiency trends were mixed between FY2012-13 and FY2014-15 as shown below:

Passengers per Vehicle Service Hour Trends
Fixed-Route Bus Service

Agency	Productivity	Ridership	Notes
SFMTA	⟷	⬆	Small increases in service and ridership
VTA	⟷	⬆	Small increases in service and ridership
FAST	⬆	⬆	Small decrease in service; ridership increased
LAVTA	⬇	⬇	Service increased; small ridership decrease
Union City	⬇	⬇	Decreases in service and ridership

Transit Sustainability Project (TSP) and/ Productivity Improvement Program (PIP)

In accordance with TDA legislation, MTC annually adopts a PIP, a set of projects to be undertaken by transit operators in the region within the next three years to improve productivity and lower operating costs. Before MTC can allocate TDA or State Transit Assistance (STA) funds to the operators for FY 2017-18, MTC must approve the FY 2016-17 PIP and affirm that operators have made a reasonable effort in implementing their PIP project(s) in FY2015-16.

Historically, PIP projects were derived from recommendations made in the operators' most recently completed TDA performance audits as required by

law. In coordination with the transit operators, the PIP development process was revised in 2014 to incorporate the TSP performance metrics for the largest seven operators (recent results shown in Attachment 1) and specific service and institutional recommendations for the smaller operators. Staff continues to work with the smaller operators on ways to streamline the PIP and TSP process and to incorporate other initiatives underway at the agencies.

Attachment 2 summarizes the PIP projects for each operator; Attachment A to Resolution No. 4249 provides a more detailed description of all PIP projects.

Large Operators – PIP Projects
The seven large operators (AC Transit, BART, Caltrain, Golden Gate, SamTrans, SFMTA, and SCVTA) have identified achieving a 5% reduction by FY2016-17 in one of the TSP performance metrics as their PIP project. After the end of a fiscal year, it takes approximately one year to finalize the NTD data, which results in a time lag for the TSP analysis. This year's TSP performance analysis is based on audited FY 2014-15 data; the FY 2016-17 performance will be presented in Fall 2018.

Attachment 1 and the table below summarize progress to date towards achieving this reduction in the three metrics: Cost per Revenue Hour, Cost per Passenger, or Cost per Passenger Mile. Six of the seven operators have achieved a 5% reduction against the baseline for FY2014-15 (based on National Transit Database (NTD) data) in at least one of the metrics. SFMTA has not.

Transit Operator	Cost per Vehicle Service Hour	Cost per Passenger	Cost per Passenger Mile
AC Transit			✓
BART		✓	✓
Caltrain		✓	✓
GGBHTD *(a)*			✓
SFMTA			
SamTrans	✓		
VTA			✓

Note: ✓ indicates that five percent real reduction in performance was met.
(a) Excludes Marin Local Bus Service.

In general, the operators aren't achieving a significant reduction in operating cost per hour. Rather, most operators are achieving the 5% performance target due to strong ridership and longer passenger trips. Achieving *both* higher ridership and better cost control is the key to a more sustainable future for Bay Area public transit. Additionally, the agencies have submitted annual updates to their TSP strategic plans that identify strategies to continue progress towards achieving the 5% reductions by FY2016-17 and beyond.

Small Operators – PIP Projects
The smaller operators have drawn upon recommendations from the TDA
performance audit, TSP, or other agency plans to improve productivity or lower
operating costs.

Issues: **Golden Gate Bridge, Highway and Transportation District (GGBHTD).** In
2013, when the TSP targets and baselines were developed, GGBHTD was
responsible for reporting on both regional and local bus services. In 2014,
Marin County Transit District (MCTD) began managing the local bus service
directly and reported the local bus service data separately to NTD (beginning in
FY 2014-15). As a result, GGBHTD now only reports its regional bus transit
service, instead of both regional and local services. This change in methodology
rendered past years of NTD data non-comparable with current reports. For the
TSP performance metrics evaluation moving forward, staff recommends
measuring GGBHTD based on its regional bus service only and adjusting the
FY2008 through FY2014 data to reflect this change. For comparative purposes,
results including and excluding the Marin local bus service are included in
Attachment 1.

Caltrain. In FY 2013, the Federal Transit Administration (FTA) instructed
Caltrain to no longer include the Stanford Marguerite shuttle services in its
NTD reporting. These shuttles are operated and funded primarily by Stanford
University and Caltrain does not control the administration and operation of
these services. This change in methodology rendered past years of NTD shuttle
data non-comparable with current reports and distorted the performance
metrics. Staff has adjusted Caltrain's baseline to remove the operating statistics
for the Stanford Marguerite shuttles in order to account for the change in the
NTD reporting. The performance metrics presented represent Commuter Rail
and Caltrain managed shuttle services only.

SFMTA. While SFMTA did not achieve the metrics in FY 2014-15, the agency
has achieved the TSP performance metrics in past years and expects to achieve
the metrics once their data reporting issues are resolved. SFMTA discovered
their Automatic Passenger Counters (APCs) were not functioning and
undercounted passengers. In FY 2015-16, SFMTA began installing new APCs
on all newly-procured vehicles. Once SFMTA's new radio communications
system becomes functional in FY 2016-17, the APCs will begin reporting
ridership for these vehicles. As a result, SFMTA expects ridership counting
accuracy to improve, which will likely impact future calculations of Cost per
Passenger Mile and Cost per passenger.

Recommendation: Refer MTC Resolution No. 4249 to the Commission for approval

Attachments: Attachment 1 – Large Operators – TSP Performance Metric Summary
Attachment 2 – List of Operators and Summary of PIP Projects
Presentation
MTC Resolution No. 4249

Attachment 1
Large Operators – TSP Performance Metrics and Targets
FY2014-15 Performance Vs. Baseline Year*

OPERATING COST PER VEHICLE SERVICE HOUR

Transit Operator	Baseline Highest Year		Assessment Year	Percent Change from Highest^	FY2016-17
	Year	Performance	FY2014-15	FY2014-15	Target *(a)*
AC Transit	FY2010-11	$172.55	$174.36	1.0%	$163.93
BART	FY2009-10	$282.60	$289.69	2.5%	$268.47
Caltrain	FY2010-11	$433.40	$485.33	12.0%	$411.73
GGBHTD (Excludes Marin Bus)	FY2010-11	$355.12	$348.65	-1.8%	$337.36
GGBHTD (Includes Marin Bus)	FY2010-11	$287.56	$294.13	2.3%	$273.19
SFMTA	FY2009-10	$208.40	$215.37	3.3%	$197.98
SamTrans	FY2008-09	$202.08	$172.60	-14.6%	$191.98
VTA	FY2010-11	$189.31	$188.70	-0.3%	$179.85

OPERATING COST PER PASSENGER

Transit Operator	Baseline Highest Year		Assessment Year	Percent Change from Highest^	FY2016-17
	Year	Performance	FY2014-15	FY2014-15	Target *(a)*
AC Transit	FY2008-09	$5.99	$6.22	3.8%	$5.69
BART	FY2008-09	$4.95	$4.37	-11.7%	$4.70
Caltrain	FY2009-10	$8.93	$6.04	-32.4%	$8.48
GGBHTD (Excludes Marin Bus)	FY2010-11	$15.74	$15.07	-4.3%	$14.95
GGBHTD (Includes Marin Bus)	FY2010-11	$11.97	$12.19	1.8%	$11.38
SFMTA	FY2009-10	$3.33	$3.38	1.5%	$3.16
SamTrans	FY2010-11	$8.75	$8.78	0.3%	$8.31
VTA	FY2009-10	$7.63	$7.60	-0.4%	$7.25

OPERATING COST PER PASSENGER MILE

Transit Operator	Baseline Highest Year		Assessment Year	Percent Change from Highest^	FY2016-17
	Year	Performance	FY2014-15	FY2014-15	Target *(a)*
AC Transit	FY2009-10	$2.05	$1.58	-22.9%	$1.95
BART	FY2008-09	$0.39	$0.33	-15.0%	$0.37
Caltrain	FY2007-08	$0.37	$0.25	-31.7%	$0.35
GGBHTD (Excludes Marin Bus)	FY2008-09	$1.12	$0.97	-13.4%	$1.06
GGBHTD (Includes Marin Bus)	FY2008-09	$1.22	$0.99	-18.9%	$1.16
SFMTA	FY2009-10	$1.59	$1.60	0.6%	$1.51
SamTrans	FY2010-11	$1.83	$1.92	4.9%	$1.73
VTA	FY2009-10	$1.61	$1.40	-13.0%	$1.53

Notes:
* Figures are reprented in 2015 $.
^ shading indicates five percent or greater real reduction in performance
(a) Equals five percent reduction from baseline highest year in FY2014-15 dollars.

Attachment 2 – Summary of PIP Projects

Large Operators

Agency	Project	Estimated Completion Date
AC Transit, BART, Caltrain, Golden Gate Transit, SamTrans, SFMTA, SCVTA	Transit Sustainability Project (TSP) – Achieve a 5% reduction in at least one of the Resolution 4060 – TSP Performance Measures: Cost per hour, cost per passenger, or cost per passenger mile.	End of FY2016-17 and annually thereafter

Small Operators

Regional Projects

Agency	Project	Status
All	Implement Clipper	Completed (except Union City)
WETA	Fare Program Transfer Policy	Continuing
	Alameda Terminals Access Improvements	Continuing

Alameda County

Agency	Project	Status
LAVTA	Comprehensive Operational Analysis	Completed
	Fixed Route Bus Service On-Time Performance Improvement Project	New
	Paratransit Service Data Improvement Project	New
Union City	Paratransit Plus Trip Productivity	Continuing
	Implement Clipper	Continuing
	Evaluate Automatic Vehicle Location (AVL) Technology	On hold

Contra Costa County

Agency	Project	Estimated Completion Date
CCCTA, ECCTA, WestCat in partnership w/ CCTA	I-680 Transit Investment/Congestion Relief Options Study	Completed
CCCTA	Improve On-time Performance	Completed
	Bus Stop Access Improvement Project	New
ECCTA	Increase Passenger Productivity and Cost-effectiveness of Paratransit Service	Continuing
	Coordinate Intake and Processing of Paratransit Applications in Contra Costa County	Suspended
WestCat	Implement timed transfers at Hercules Transit Center	New

Marin County

Agency	Project	Estimated Completion Date
Marin Transit	Participate in San Rafael Bettini Transit Center Relocation Study	Continuing
	Clipper Assessment	Completed
	Clipper Improvements	New
	Scheduling software for demand responsive transportation services	New

Napa County

Agency	Project	Estimated Completion Date
NVTA	VINE Bus Stop Informational Signs Upgrade	Continuing
	Computer Aided Dispatch/ AVL system	Continuing
	VINE Transit Comprehensive Operational Analysis	New
	VINE Transit Express Bus Study	New

Solano County

Agency	Project	Status
Solano Transportation Authority for all Solano County Operators	Solano County Mobility Management Program Enhancements	Continuing
	I-80/I-680/I-780/State Route 12 Transit Corridor Study Update	Continuing
Rio Vista	Improve service efficiency and effectiveness	Completed
SolTrans	Implement Automatic Call-back System for Paratransit Customers	Continuing
	Compressed Natural Gas (CNG) Fueling Facility	Continuing
	AVL Implementation	Continuing
City of Vacaville	Research Block Party Public Outreach Concept	Continuing
	Zero Emissions Bus Research	New

Sonoma County

Agency	Project	Status
City of Petaluma	SMART Service Coordination Project	Continuing
	Adopt a Transit Asset Management Plan (TAM)	New
	AVL Implementation	Completed
Santa Rosa	Implement Reimagining CityBus	New
	Implement Paratransit Efficiency Recommendations Tier One	Continuing
Sonoma County	Adopt Transit Asset Management Plan	Continuing

Presentation Overview

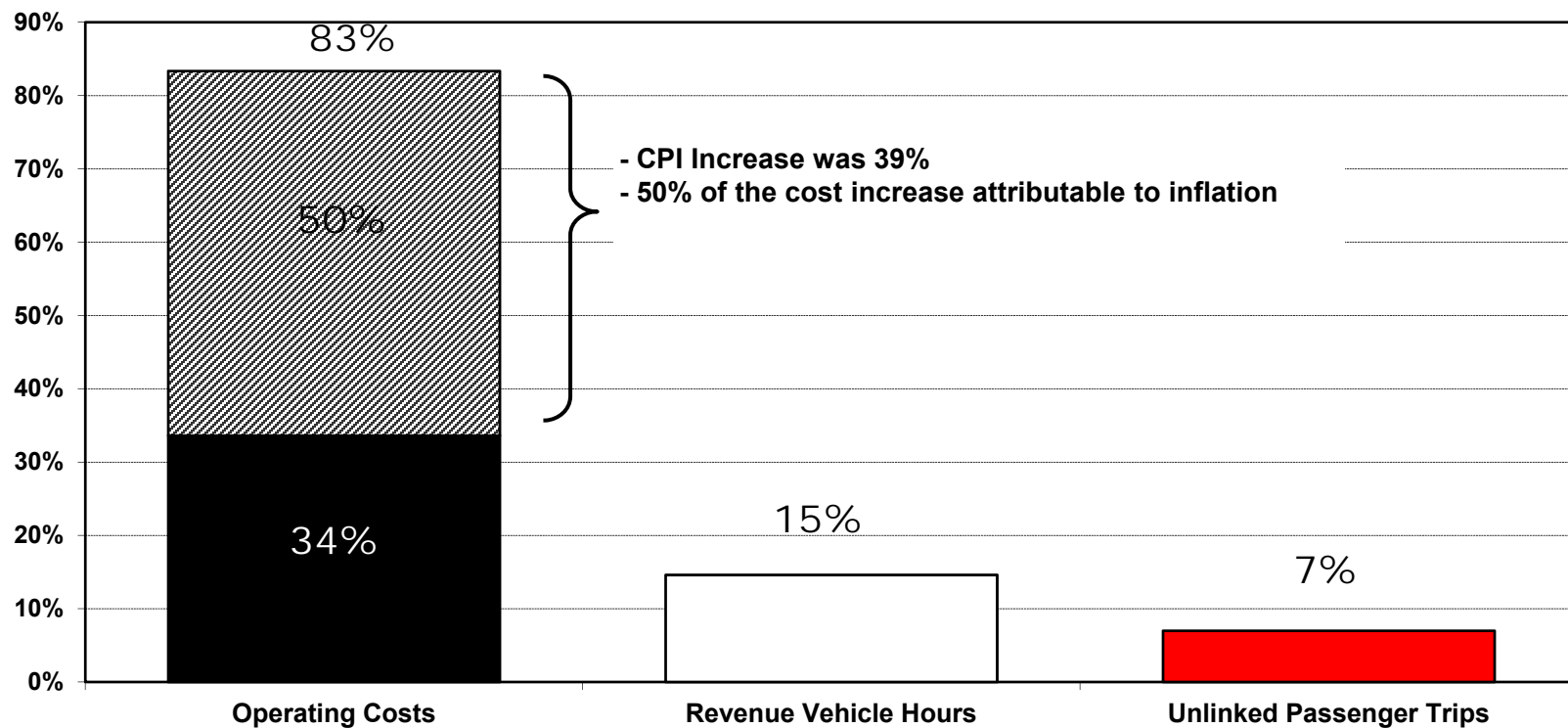## Part A: Transit Sustainability Project (TSP) – Large Operator Performance

- Reduction from baseline of at least one cost metric by 5% by FY2016-17

- Starting in FY2018-19, MTC will link operating and capital funds administered by MTC to progress towards achieving the performance targets

Part B: TDA Performance Audits

- Triennial compliance audits are focused on multi-year trends and performance measures

- Current audit round: SFMTA, VTA, FAST, LAVTA, Union City

- Covers 3-year period: FY 2012-13, FY 2013-14, FY 2014-15

Performance Metrics	
TDA Audit	TSP Large Operator Metrics
Cost Per Vehicle Service Hour	Cost Per Vehicle Service Hour
Cost Per Passenger	Cost Per Passenger
Passengers Per Vehicle Service Hour	Cost Per Passenger Mile
Passengers Per Vehicle Service Mile	
Vehicle Service Hours Per Employee	

Bay Area Large Operators: Percent Change in Cost and Performance Indicators (1997 – 2008)

- CPI Increase was 39%
- 50% of the cost increase attributable to inflation

Chart showing percent change from 0% to 90%:
- Operating Costs: 83% total (34% black, 50% hatched)
- Revenue Vehicle Hours: 15%
- Unlinked Passenger Trips: 7%

TRANSIT SUSTAINABILITY PROJECT

Transit Sustainability Project (TSP) and Transit Performance

MTC annually adopts Productivity Improvement Program (PIP) projects in accordance with TDA law. PIP projects derived from:

- Strategic Plans developed by the largest seven operators to achieve performance targets set forth in MTC Resolution 4060

- Service and institutional recommendations set forth in MTC Resolution 4060

- TDA performance audit findings and other agency initiatives

TRANSIT
SUSTAINABILITY
PROJECT

MTC Resolution 4060:
TSP Performance Metrics and Targets

- Target: Reduce operating cost per service hour, cost per passenger, or cost per passenger mile by 5% by FY2016-17 and no growth beyond CPI thereafter

- Targets set compared to the highest cost per metric experienced by each agency between 2008 and 2011

- Starting in FY2018-19, MTC will link existing and new operating and capital funds administered by MTC to progress towards achieving the performance targets

TRANSIT
SUSTAINABILITY
PROJECT

MTC Resolution 4060:
TSP Performance Metrics and Targets
FY 2014-15 Assessment

Transit Operator	Percent Change from Highest Baseline Year in FY 2014-15 (a)		
	Cost per Vehicle Service Hour	Cost Per Passenger	Cost Per Passenger Mile
AC Transit	1.0%	3.8%	-22.9%
BART	2.5%	-11.7%	-15.0%
Caltrain	12.0%	-32.4%	-31.7%
GGBHTD (Excludes Marin Bus)	-1.8%	-4.3%	-13.4%
GGBHTD (Includes Marin Bus)	2.3%	1.8%	-18.9%
SFMTA	3.3%	1.5%	0.6%
SamTrans	-14.6%	0.3%	4.9%
VTA	-0.3%	-0.4%	-13.0%

Note:

(a) Highest baseline year varies by each operator. Percentages shown represent the percentage change in FY 2014-15 from the baseline year for each of the 3 TSP performance metrics. Shading indicates a five percent or greater real reduction in performance. Figures are represented in FY2014-15 dollars.

TRANSIT SUSTAINABILITY PROJECT

Performance Measure Progress to Date

- Operating cost per hour exhibits mixed results with only one of the operators achieving the 5% reduction target.

- While four operators exhibit improved cost per passenger, only two meet, or exceed 5% reduction target.

- Five of the seven operators on target to achieve 5% reduction in cost per passenger miles.

- SFMTA's performance, particularly in cost per passenger and cost passenger mile, is likely being influenced by recent difficulties in ridership reporting.
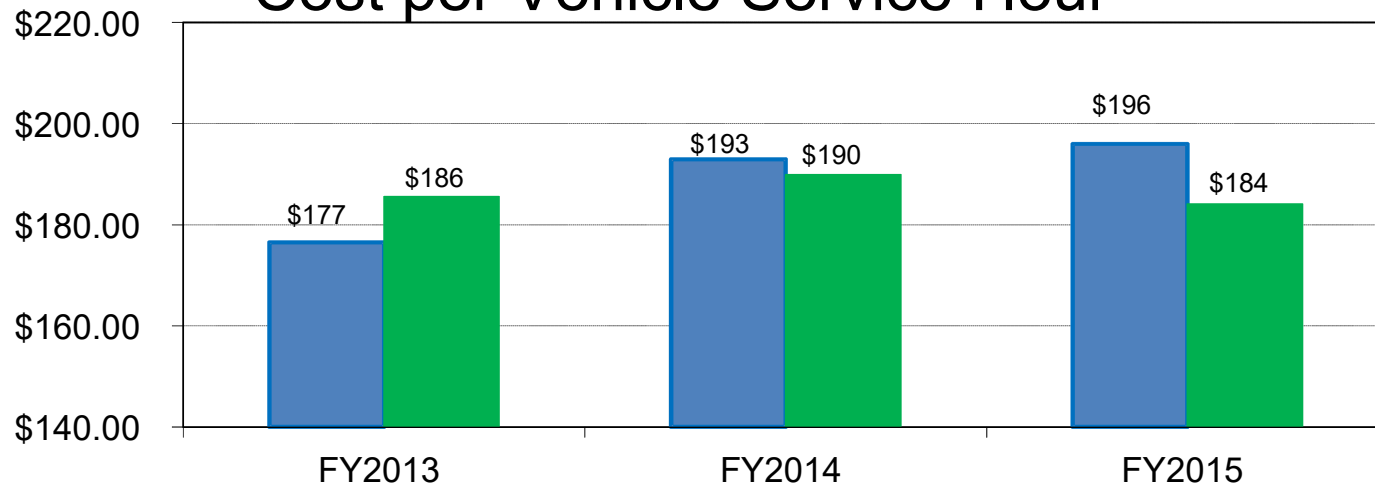
Small Operators:
PIP Focus on TSP Recommendations and Specific Transit Agency Initiatives

- Transit Asset Management Plan Implementation

- Mobility Management

- Operational Improvements

- Technology Improvements

TDA Audit Results
Fixed-Route Bus – Larger Operators
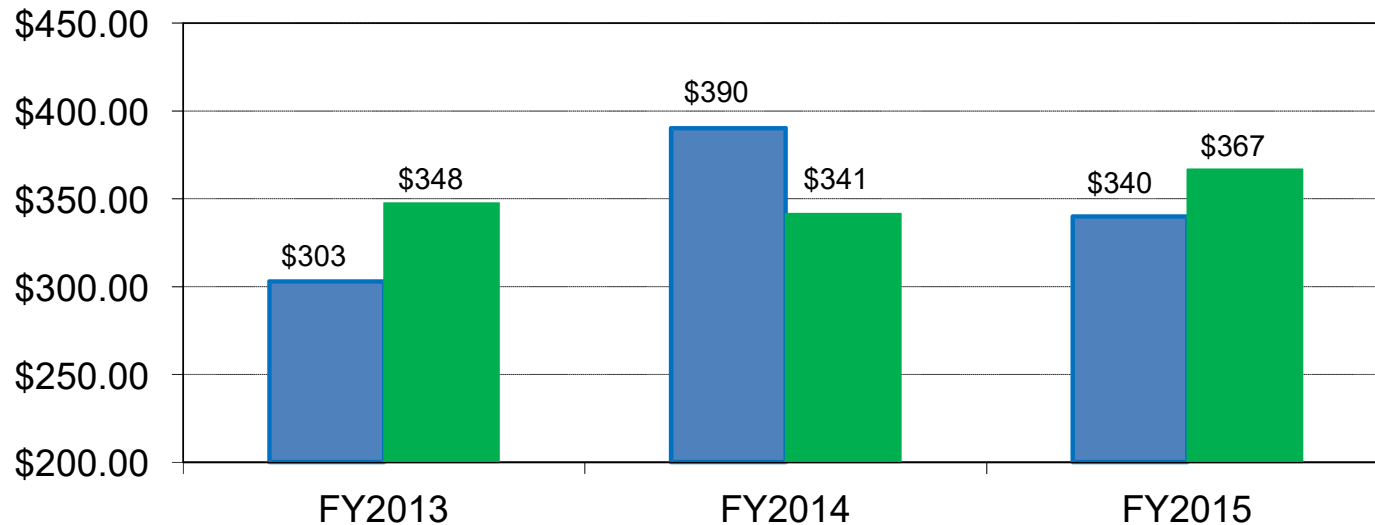### Cost per Vehicle Service Hour

FY2013-FY2015 Average Annual Change (CPI = 2.4%)	
■ SFMTA 5.4%	■ VTA -0.4%

- SFMTA insurance and benefit cost increases in FY2014 resulted in a 10 percent increase in bus cost per vehicle service hour.

- VTA bus cost per hour decreased 3.1 percent in FY2015 due to service hours increasing at a higher rate than operating cost.

Light Rail – Larger Operators
Cost per Car Service Hour
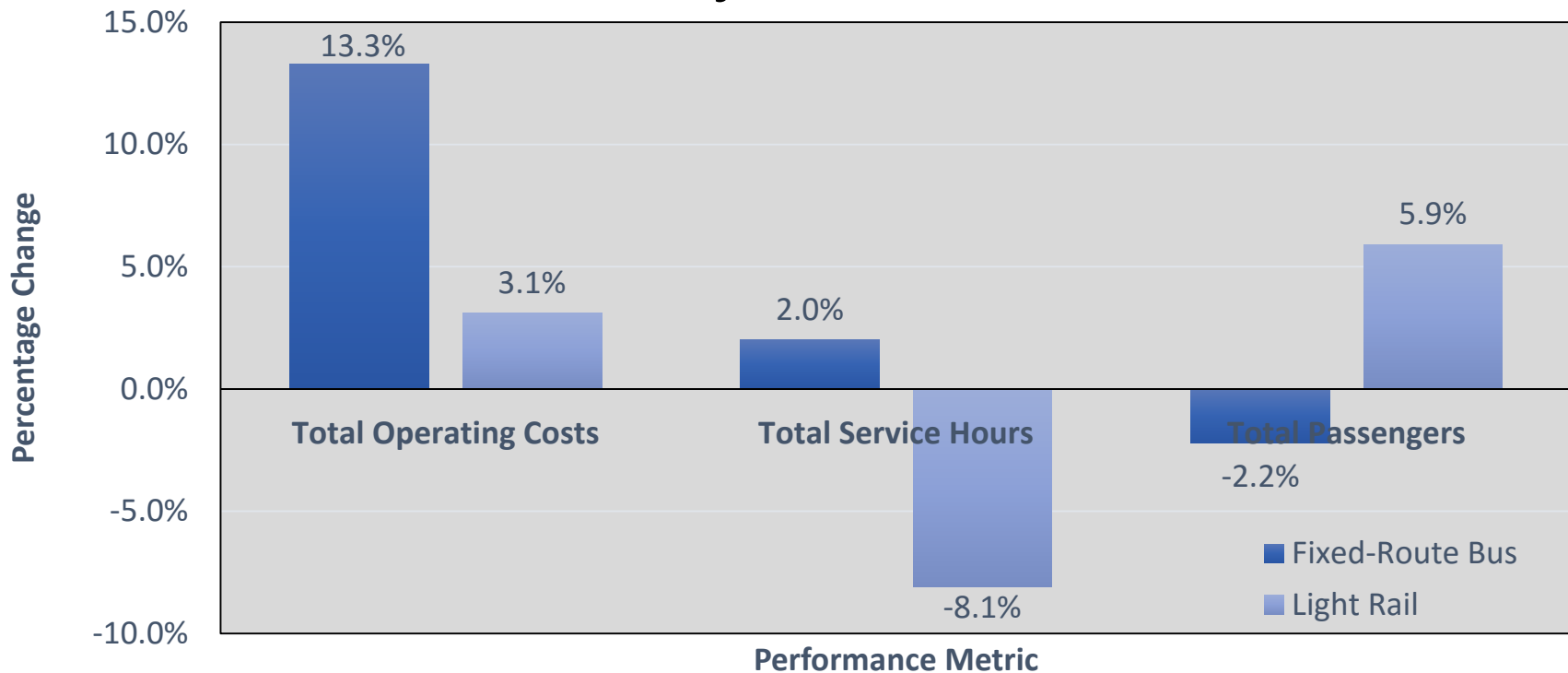

- SFMTA cost per hour increase in FY2014 due to change in data collection methodology.

- VTA operating costs rose 8.6 percent per year on average while car service hours rose 5.7 percent per year.
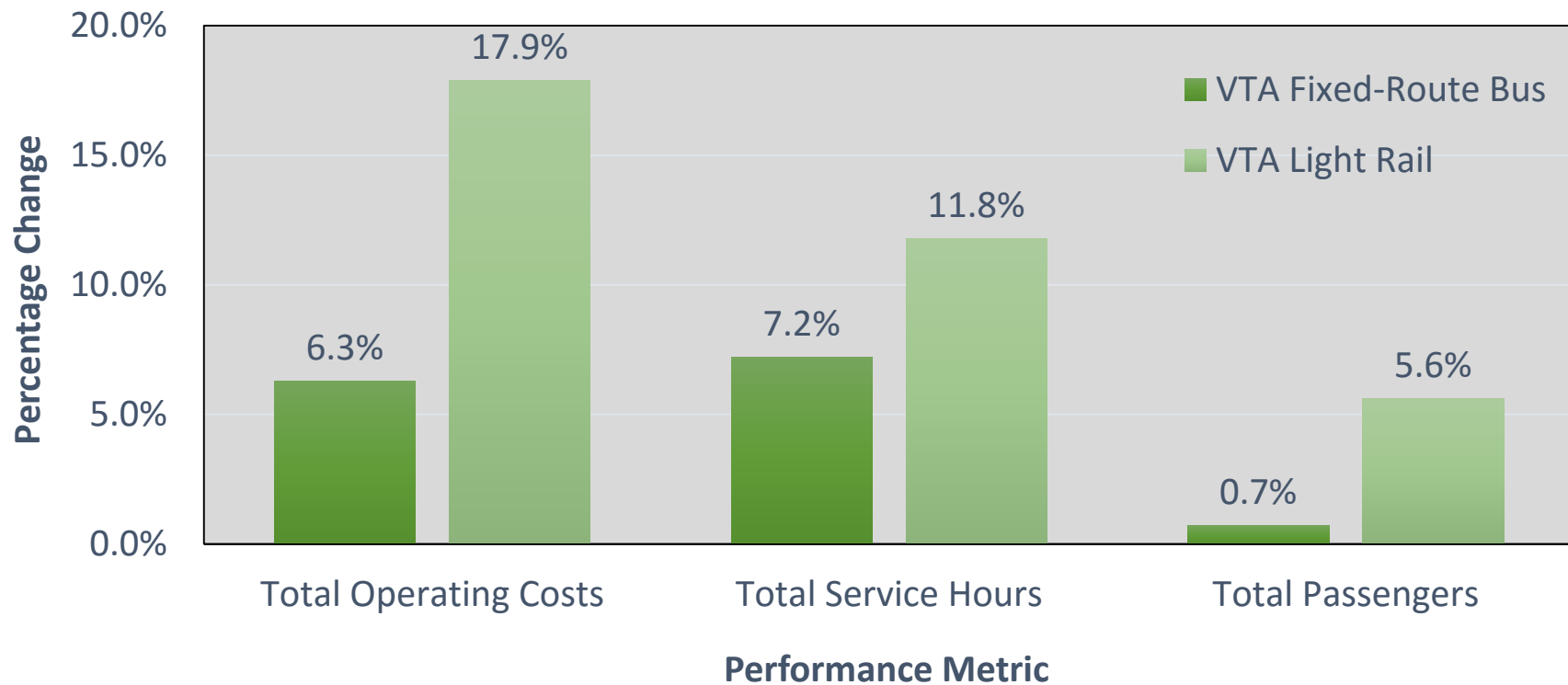
SFMTA
Three-year Trends

- Increase in bus operating costs due to a sharp rise in labor costs (9 percent) and fringe benefits (16 percent) during the audit period.

- Ridership decline on bus due to inaccurate results from Automatic Passenger Counting (APC) equipment.
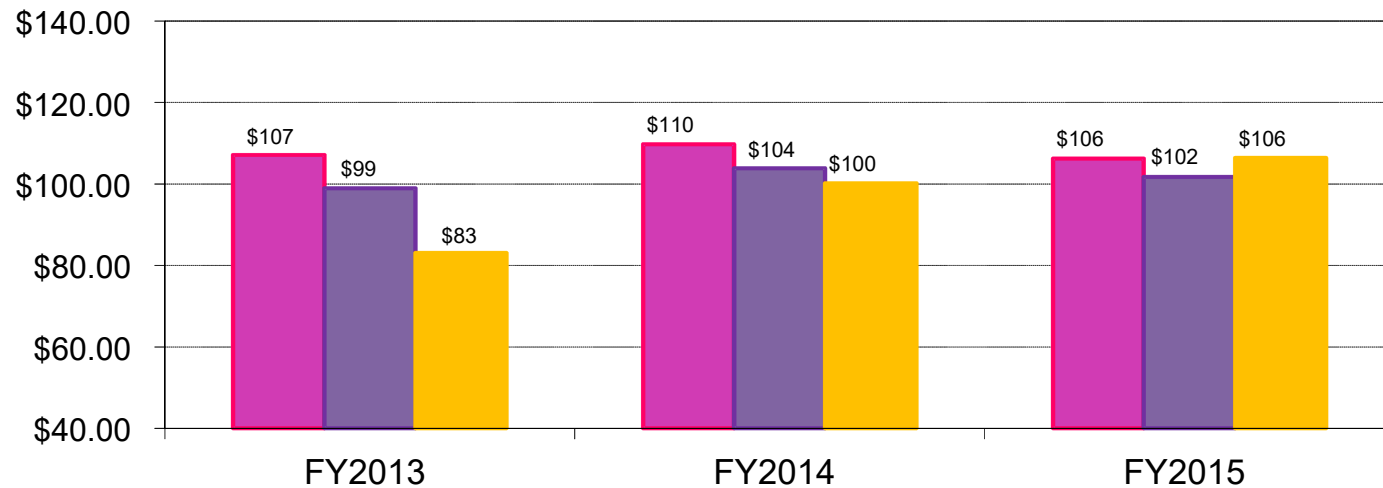
VTA
Three-year Trends

- Increase in light rail operating costs due to a sharp rise in labor costs (24 percent) and fringe benefits (9 percent) during the audit period.

- Ridership held steady on bus while light rail ridership increased an average of three percent per year during the audit period.

Fixed-Route Bus – Smaller Operators
Cost per Vehicle Service Hour

FY2013-FY2015 Average Annual Change *(CPI = 2.4%)*		
▉ FAST -0.4%	▉ LAVTA 1.4%	▉ Union City 13.1%

- FAST's cost per vehicle service hour decreased by 3.2 percent in FY2015.

- LAVTA's cost per service hour increased at less than the rate of inflation.

- Union City's cost per hour increased more than 20 percent in FY2014, when a major service change was implemented.

13

Fixed-Route Bus – Smaller Operators
Three-year Trends
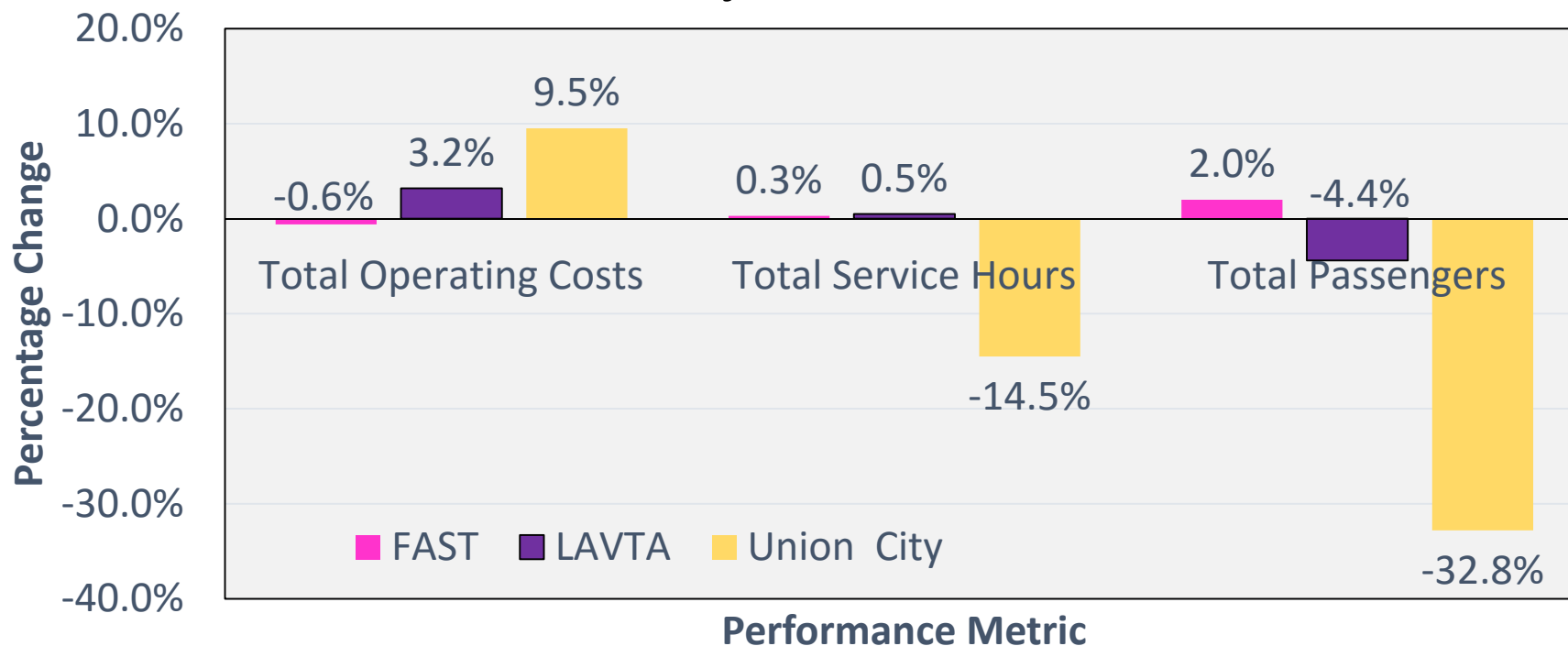
- FAST's operating costs and service levels held steady during the audit period, while ridership experienced a slight increase.

- Although LAVTA service levels remained steady, ridership declined in each year of the audit period.

- Union City's service change in FY2014 resulted in increased costs, reduced service levels and declining ridership.

Comparison of Average Annual Change in Cost per Vehicle Service Hour for Larger Operators (Fixed-Route Bus - FY2013-FY2014)
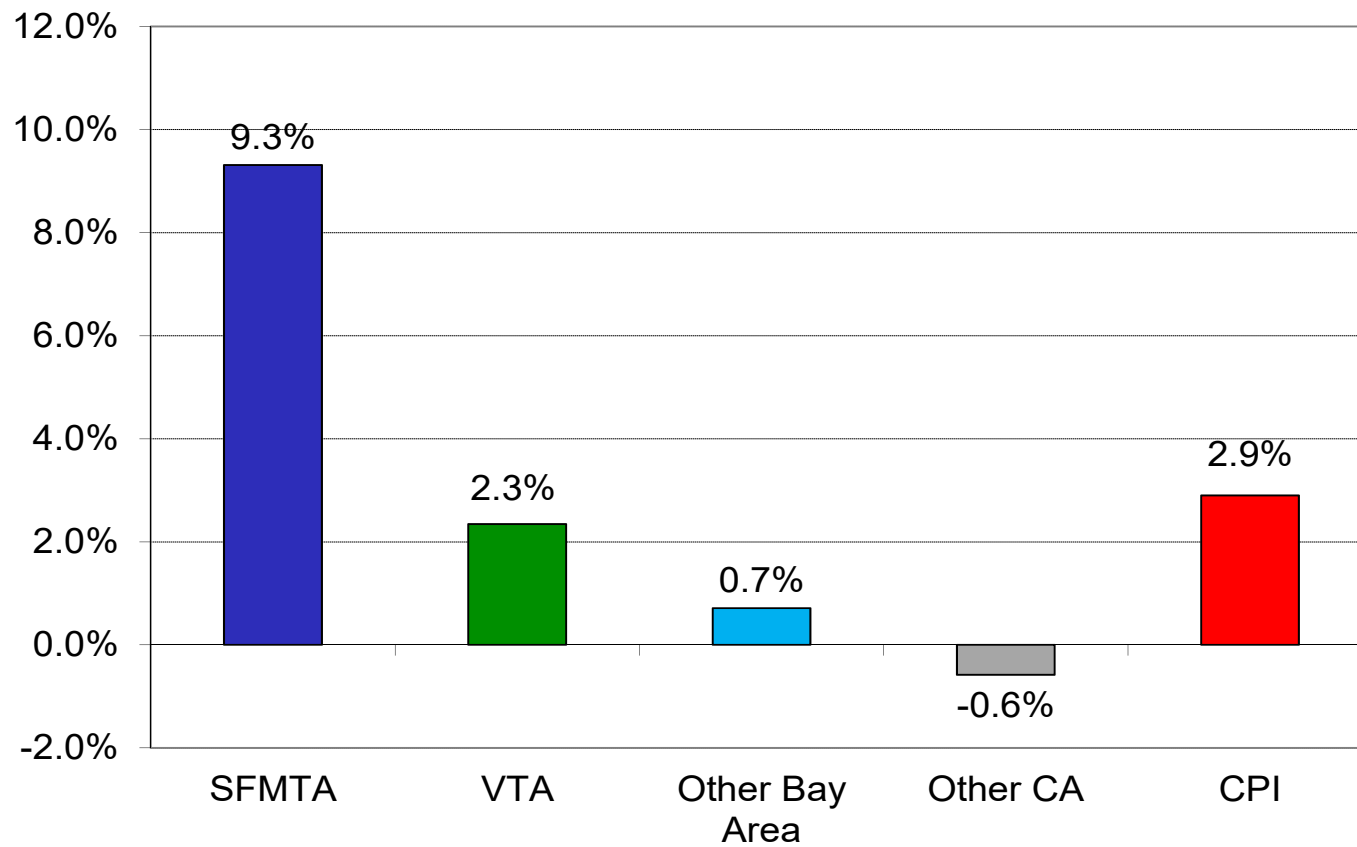
"Other Bay Area": AC Transit, CCCTA, GGBHTD, and SamTrans.

Comparison of Average Annual Change in Cost per Vehicle Service Hour for Smaller Operators (Fixed-Route Bus - FY2013-FY2014)
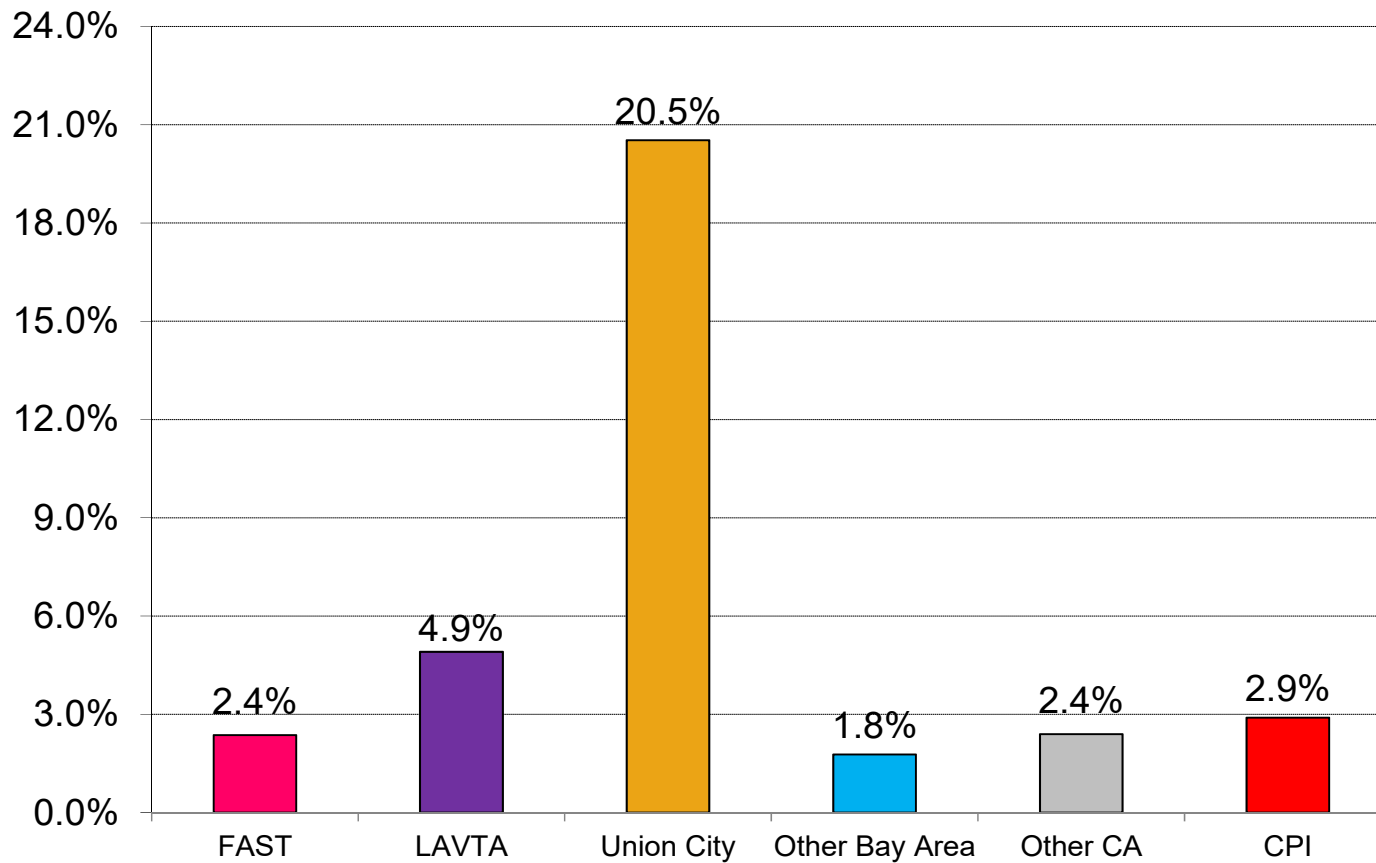
"Other Bay Area": Dixon, NCTPA, Petaluma, Rio Vista, Santa Rosa, SCT, Tri Delta, Vacaville, and WestCAT.

Audit Recommendations

Transit Operator	Recommendations
SFMTA	• Continue efforts to improve automatic passenger counter data. • Ensure paratransit passenger trip data is consistent and accurate.
VTA	• Improve on-time performance of the fixed-route bus and light rail service and study decreased performance. • Develop a plan to address declining service reliability of the fixed-route bus and light rail service. • Address the significant increase in lost days due to industrial accidents for the light rail service.
FAST	• Develop strategies to address mechanical failure rates (bus service). • Continue to improve preventable accident rate. • Develop and implement strategies to reduce trip cancellations and passenger no-shows on the paratransit service.
LAVTA	• Ensure paratransit data is collected and reported accurately. • Develop strategies to improve on-time performance (fixed-route bus).
Union City	• Continue to return to 2014 service structure. No Recommendations.

ABSTRACT

Resolution No. 4249

This resolution adopts MTC's FY2016-17 Productivity Improvement Program (PIP).

Further discussion of this action is contained in the Programming and Allocations Committee Summary Sheet for November 9, 2016.

Re: <u>MTC Productivity Improvement Program</u>

METROPOLITAN TRANSPORTATION COMMISSION
RESOLUTION NO. 4249

WHEREAS, Public Utilities Code (PUC) section 99244 provides that each transportation planning agency shall annually identify, analyze, and recommend potential productivity improvements which could lower the operating costs of transit operators within the area under its jurisdiction; and

WHEREAS, as provided for in Government Code sections 66500 <u>et</u> <u>seq</u>., the Metropolitan Transportation Commission (MTC) is the regional transportation planning agency for the San Francisco Bay Area; and

WHEREAS, PUC section 99244 provides that recommendations for improvements and productivity shall include, but not be limited to, those recommendations related to productivity made in the triennial performance audits of transit operators conducted pursuant to PUC section 99246; and

WHEREAS, in accordance with PUC section 99244, MTC is required each fiscal year, to make a finding that a transit operator has made a reasonable effort in implementing productivity improvement recommendations prior to approving the allocation of Transportation Development Act (TDA) funds in an amount greater than was allocated to the operator in the preceding fiscal year; and

WHEREAS, in accordance with PUC section 99314.7, MTC is required each fiscal year, to make a finding that a transit operator has made reasonable effort in implementing productivity improvements pursuant to PUC section 99244, prior to approving the allocation of State Transit Assistance (STA) funds to the operator for operating purposes; and

WHEREAS, in accordance with PUC section 99233.2, MTC may support the regional transportation planning process by providing technical assistance funding to transit operators or other entities to implement transit productivity improvements; now, therefore, be it

RESOLVED, that MTC adopts the productivity improvement projects set forth in Attachment A to this resolution, and incorporated herein by reference; and

RESOLVED, that MTC finds that all transit operators identified in Attachment A have made reasonable effort in implementing productivity improvements and are eligible for allocations of TDA and STA funds next fiscal year in accordance with PUC sections 99244 and 99314.7.

METROPOLITAN TRANSPORTATION COMMISSION

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Dave Cortese, Chair

The above resolution was adopted by the
Metropolitan Transportation Commission
at a regular meeting of the Commission held in
San Francisco, California, on November 16, 2016.

Date: November 16, 2016
W.I.: 1514
Referred By: PAC

Attachment A
Resolution No. 4249
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Large Operators

Transit Operator: AC Transit, BART, Caltrain, Golden Gate Transit, SamTrans, SFMTA, SCVTA

Project Title: Transit Sustainability Project – Performance Measures

Project Goal: Progress towards achieving a 5% reduction by FY2016-17 in at least one of the three performance measures outlined in MTC Resolution 4060.

Project Description: MTC Resolution No. 4060 established performance measures and targets for the largest seven Bay Area transit operators to achieve a five percent (5%) reduction by FY2016-17 in one of three performance measures and with no growth beyond the Consumer Price Index (CPI) thereafter. These measures are:

- Cost Per Vehicle Service Hour;
- Cost Per Passenger; and
- Cost per Passenger Mile.

Each agency adopted a strategic plan in FY2012-13 that described how the agency intends to meet one or more of the performance targets. Beginning in FY2013-14, each agency is required to submit performance data on all three measures and targets as part of MTC's ongoing monitoring of progress towards meeting the targets.

Estimated Completion Date: End of FY 2016-17 and annual updates thereafter.

Small Operators

Regional

Transit Operator: Water Emergency Transportation Authority (WETA)

Project Title: Fare Program Transfer Policy

Project Goal: Encourage bus-to-ferry transfer at origin stations throughout the WETA system.

Project Description: Adopt WETA Fare Program Transfer Policy to reimburse ferry riders the cost of their bus trip to the terminal, reducing the overall cost of a linked transit trip. The cost for the transfer will be split between WETA and the terminal-serving transit agency.

Estimated Completion Date: March 2017

Transit Operator: Water Emergency Transportation Authority (WETA)

Project Title: Alameda Terminals Access Improvements

Project Goal: Improve opportunities for accessing both ferry terminals in Alameda, encouraging non-automotive modes such as transit, walking and biking.

Project Description: The Alameda Terminals Access Plan, currently underway and being developed, will identify a series of capital and programmatic improvements to encourage more riders to take the ferry in Alameda. The Access Improvements will likely range from bike lane gap closures, bicycle parking, pedestrian safety improvements and bus routing and scheduling changes.

Estimated Completion Date: June 2017

Alameda County

Transit Operator: Livermore Amador Valley Transit Authority (LAVTA)

Project Title: Paratransit Service Data Improvement Project   *(NEW)*

Project Goal: Ensure that data is collected and reported accurately by LAVTA's Paratransit Contractor and that this data is then reported accurately to NTD.

Project Description: LAVTA's data definitions and collection comply with TDA requirements; however, the actual reporting of the data by the paratransit contractor has some flaws. Specifically, the data on vehicle service hours and miles, paratransit trip cancellations and passenger no shows, and late trip cancellations. LAVTA will examine the data collection and reporting activities of its paratransit contractor and implement any corrective actions needed to ensure that operating data are being accurately collected and reported. Further, LAVTA will ensure that requirements concerning data collection will be a part of any future request for proposals and resulting service contracts going forward.

Estimated Completion Date: December 2016

Transit Operator: Livermore Amador Valley Transit Authority (LAVTA)

Project Title: Fixed Route Bus Service On-Time Performance Improvement Project *(NEW)*

Project Goal: Examine causes and prepare a plan for improving on-time performance of the fixed route bus service.

Project Description: LAVTA's fixed-route on-time performance for the three years of the most current TDA audit period was consistently in the 80 percent range. The previous Short Range Transit Plan included a standard of 90 percent. LAVTA has examined its fixed-route bus service to determine the cause(s) for the underperforming on-time scheduled bus service through the process of a comprehensive operations analysis that was completed in FY16. LAVTA will implement the changes over the course of the next 18 months, with the goal of reaching 85% within that timeframe.

Estimated Completion Date: November 2017

Transit Operator: Union City

Project Title: Paratransit Plus Trip Productivity

Project Goal: Increase productivity of non-ADA paratransit plus trips

Project Description: Increase the productivity of Paratransit Plus trips by linking all non-ADA trips with an ADA paratransit trip. Develop and implement dispatching standards for paratransit plus trips.

Estimated Completion Date: December 2016

Transit Operator: Union City

Project Title: Implement Clipper

Project Goal: Make electronic fare payment available to make fare payment easier.

Project Description: Union City is eager to implement the Bay Area's regional smart card based fare payment system to make it easier for their riders who may also use other transit systems.

Estimated Completion Date: Spring 2017

Transit Operator: Union City

Project Title: Evaluate Computer Aided Dispatch (CAD)/Automatic Vehicle Location (AVL) Technology

Project Goal: Cost-effectively enhance service performance via remote system monitoring and providing real-time information to customers.

Project Description: Project on hold to focus on new scheduling software and Clipper implementation. Project will evaluate feasibility of an integrated CAD/AVL system that allows for a multi-functional single point login. Ideally the system would be used to monitor vehicles and assist with scheduling while also providing real-time arrival information to the public to facilitate trip planning. All vehicle information would be compatible with 511.org trip planner and Google Transit.

Estimated Completion Date: December 2017

Contra Costa County

Transit Operator: Central Contra Costa Transit Authority (CCCTA)/ County Connection

Project Title: Bus Stop Access Improvement Project   *(NEW)*

Project Goal: Improve access to bus stops by providing passenger amenities, improved signage, and ADA accessibility.

Project Description: Recommendations in the Bus Stop Access Improvement Study will be implemented to improve passenger amenities, provide additional information to the public, and improve ADA accessibility.

Estimated Completion Date: June 2017

Transit Operator: Eastern Contra Costa Transit Authority/Tri-Delta

Project Title: Increase Passenger Productivity and Cost-effectiveness of Paratransit Service

Project Goal: Examine and develop strategies to improve paratransit productivity.

 Project Description: Continuing effort to improve the recurring, TDA Performance Audit recommendation to improve paratransit efficiency which continues to slip as demand in the sub-region grows. New paratransit contract starting in FY 2016-17 includes financial incentives for improved productivity. TriDelta will monitor whether these incentives improve productivity.

 Estimated Completion Date: December 2017

Transit Operator: Western Contra Costa Transit Authority (WestCat)

Project Title: Implement timed transfers at Hercules Transit Center *(NEW)*

Project Goal: The project seeks to improve the predictability and convenience of transfers between local feeder routes and express services. The project will also allow WCCTA to gauge the effectiveness of feeder connections and to make adjustments accordingly.

 Project Description: WCCTA proposes to implement a new comprehensive local & express bus schedule in September 2016. The schedule will focus on creating a pulse system where local &

express routes converge on a transit hub to maximize transfer opportunities. Ridership data from before and after the schedule is implemented will be analyzed to assess the ability of the new system to increase transfer activity and to increase the use of local feeder routes.

Estimated Completion Date: December 2017

Marin County

Transit Operator: Marin Transit

Project Title: Participate in San Rafael Bettini Transit Center Relocation Study

Project Goal: SMART train service to San Rafael and Larkspur

Project Description: When SMART service extends to Larskpur, the SMART tracks will travel north-south through the Bettini Transit Center and divide it into two sides, requiring a plan to fully or partially relocate the Transit Center in order to maintain the current level of service and to accommodate potential new bus service resulting from the opening of SMART. This study will build on the conceptual work completed in the Downtown Station Area Plan which identified a need to integrate rail and bus transit, potentially in a consolidated transit complex. The City of San Rafael is the lead agency for the study with GGBHTD and Marin Transit as partner agencies.

Estimated Completion Date: October 2016

Transit Operator: Marin Transit

Project Title: Clipper Improvements *(NEW)*

Project Goal: Increase Clipper usage on local Marin Transit services.

Project Description: Since 2007 Marin Transit has monitored Clipper usage on its routes and has observed a very low rate of participation by riders. Between FY15 and FY16 Clipper usage dropped from 10% of ridership in FY15 to just 7.5% of ridership in FY2016. The reason for the decline appears to be a preference on the part of Marin Transit riders for other pass options. This project aims to increase use of Clipper by simplifying the system, increasing availability of Clipper cards and decreasing the minimum value required to be added to cards.

Estimated Completion Date: June 2017

Transit Operator: Marin Transit

Project Title: Scheduling software for demand responsive transportation services *(NEW)*

Project Goal: Implement technology solutions to increase productivity on demand responsive services.

Project Description: Marin Transit recognizes that advances in technology and increased rates of internet and smart phone use present the opportunity for more seamless experiences and new options for travel. Marin Access riders are adopting technology, and have expressed interest in the benefits technology has to offer for transportation. The District will identify, procure, or develop technology tools that will best address identified technology needs included in the 2016 report on Marin Access Strategic Analysis and Recommendations.

Estimated Completion Date: September 2017

Napa County

Transit Operator: Napa Valley Transportation Authority (NVTA)

Project Title: VINE Bus Stop Informational Signs Upgrade *(NEW)*

Project Goal: Replace existing bus signage with new signs containing more customer service options and information.

Project Description: The new bus stop signs will inform riders at the stop of automated phone and text lines for information relating to bus service at the specific stop. The signs will also contain information for those possessing smart phones on access to service information via internet or phone application. The purpose of this is to direct some customer service questions to automated sources to reduce the amount of time spent answering routine questions by VINE staff therefore increasing customer service efficiency.

Estimated Completion Date: June 2017

Transit Operator: Napa Valley Transportation Authority (NVTA)

Project Title: Computer Aided Dispatch (CAD)/ Automatic Vehicle Locator (AVL) system

Project Goal: AVL and CAD capabilities will provide the agencies with an essential tool to help improve on-time performance, improve dispatch reliability and efficiency, increase ridership, improve scheduling and planning, and improve data management and reporting.

Project Description: Napa County Transportation and Planning Agency has identified the need to implement technological tools to assist in managing their operations and serving their customers through the collection, analysis and dissemination of reliable data on its existing fleet of transit vehicles. Based on this high priority need, Napa VINE will deploy a state-of-the-art AVL System and CAD for their fixed route and demand response fleets of vehicles. All vehicle information will be compatible with 511.org trip planner and Google Transit.

Estimated Completion Date: December 2016

Transit Operator: Napa Valley Transportation Authority (NVTA)

Project Title: VINE Transit Comprehensive Operational Analysis (COA) *(NEW)*

Project Goal: The goal of the COA is to find inefficiencies in the transit system and recommend corrective or mitigating actions. The study will also give NVTA potential areas where service is lacking and what can be done to increase service in those areas. This study will cover fixed route as well as on demand services. It will exclude express services but will incorporate findings from the Vine Transit Express Bus Study.

Project Description: NVTA will hire a consultant to gather data regarding Vine's current fixed and on demand services. The consultants will then analyze the data to find areas of potential change that will result in greater service efficiencies.

 Estimated Completion Date: November 2018

Transit Operator: Napa Valley Transportation Authority (NVTA)

Project Title: VINE Transit Express Bus Study   *(NEW)*

Project Goal: The goal of the VINE Transit Express Bus Study is to identify potential areas for expansion of service, capital improvements and efficiency enhancements.

Project Description: NVTA will hire a consultant to survey current conditions, gather data and make suggestions for future improvements to the Vine Express Bus network.

Estimated Completion Date: July 2017

Solano County

Transit Operator: Solano Transportation Authority for all Solano County Operators
                         (Dixon, FAST, Rio Vista, Soltrans, Vacaville)

Project Title: Solano County Mobility Management Program Enhancements

Project Goal: Implement a Mobility Management Plan for Seniors, People with Disabilities and the Low-Income to assist individuals find the right transportation to maintain and/or develop their mobility.

Project Description: The four components of the Mobility Management are 1) One Stop Call Center; 2) Travel Training Program; 3) Countywide In-Person ADA Eligibility Determination; and 4) Intercity Taxi Scrip. The first three have been implemented. Solano Transportation Authority will now administer the Intercity Taxi Scrip Program and incorporate non-ambulatory service into the program.

Estimated Completion Date: July 2017

Transit Operator: Solano Transportation Authority for all Solano County Operators
                       (Dixon, FAST, Rio Vista, Soltrans, Vacaville)

Project Title: I-80/I-680/I-780/State Route 12 Transit Corridor Study Update

Project Goal: Develop a service plan and identify capital improvements that will provide faster transit speeds, better service frequencies, and improved connections intra- and inter-regionally to support the future service projections in Solano County. Implement service changes in two phases.

Project Description: The I-80/I-680/I-780/State Route 12 Transit Corridor Study updates the Transit Corridor Studies completed in 2004 and 2006 and addresses current and future travel demand in the corridor, existing service and alternatives for serving the corridor and a recommended phased implementation plan. The Transit Corridor Study not only addresses transit services but also identifies facilities and connection improvements needed to support these services into the future. The Transit Corridor Plan will provide guidance and coordination for future investments in Solano County. Operational changes will be implemented in two phases.

Estimated Completion Date: June 2017

Transit Operator: Solano County Transit (SolTrans)

Project Title: Implement Automatic Call-back System for Paratransit Customers

Project Goal: Implement an automatic call-back system for Paratransit customers to remind them of appointments in order to reduce the number of no-shows.

Project Description: Implement an automatic call-back system from Trapeze Novus to work with the Trapeze scheduling software to call paratransit customers to remind them of upcoming appointments. This will allow the customer to connect with Dispatch if they need to cancel or reschedule and should reduce the number of no-shows.

Estimated Completion Date: June 2017

Transit Operator: Solano County Transit (SolTrans)

Project Title: Compressed Natural Gas (CNG) Fueling Facility

Project Goal: Design and Build a compressed natural gas fueling facility at SolTrans' operations and maintenance facility.

Project Description: SolTrans needs to replace their commuter fleet over the next four years and has determined that compressed natural gas is the best alternative fuel source at this time. SolTrans will design and build a CNG fueling facility at their Operations and Maintenance Facility to be ready for the new CNG buses that SolTrans will begin procuring later this year. The new CNG buses will increase operational efficiency with less maintenance needed for new buses and lower fuel costs.

Estimated Completion Date: March 2017

Transit Operator: Solano County Transit (SolTrans)

Project Title: Computer Aided Dispatch (CAD)/ Automatic Vehicle Locator (AVL) system

Project Goal: The project's goals include the ability to produce and provide to riders "real-time" predictive bus arrival information, also, the capture and access to a complete spectrum of planning data, ADA compliant visual and audible stop announcements, NTD (National Transit Database) accepted ridership data (via automatic passenger counters installed at bus doorways) and expanded dispatch to bus communications.

Project Description: An AVL/CAD system will allow real-time monitoring for dispatchers, showing the location of current buses, who is driving, how many passengers are on board, and if the route is on-time, late, early, etc. Planners use the data to identify productive and unproductive segments of routes (using APCs) and segments needing time adjustments. Additional functions of AVL/CAD systems include data communications between bus and dispatch, automatic announcements of approaching bus stops (ADA compliance), interaction with head sign controllers, provision of data to real-time bus arrival systems (LED signs and smartphones), etc. All vehicle information will be compatible with 511.org trip planner and Google Transit.

Estimated Completion Date: December 2017

Transit Operator: City of Vacaville

Project Title: Research Block Party Public Outreach Concept

Project Goal: Increase general public transit ridership

Project Description: Research, survey, discuss with public and local representatives a "block-party outreach" concept similar to a National Night Out event - designed to encourage more ridership on City Coach Transit. Began outreach in November 2015 and planned 12 months of events in conjunction with new service in Leisure Town that started in January 2016.

Estimated Completion Date: November 2016

Transit Operator: City of Vacaville

Project Title: Zero Emissions Bus Research *(NEW)*

Project Goal: Investigate transitional issues for City Coach to move from Compressed Natural Gas (CNG) to a Zero Emissions Bus (ZEB) fleet for fixed route and paratransit buses.

Project Description: Research the available technologies and issues Vacaville will face in moving from our current fuel type Compressed Natural Gas (CNG) to a ZEB. Develop a fuel replacement policy to aid in guiding City Coach Transit through 2040.

 Estimated Completion Date: June 2017

Sonoma County

Transit Operator: City of Petaluma

Project Title: SMART Service Coordination Project

Project Goal: Adjust schedules for existing route serving the SMART station to better serve passengers connecting to the train station

Project Description: SMART is anticipated to begin running service in 2016. Petaluma Transit currently serves the Transit Mall adjacent to the station, but adjustments in both the stop location and schedule should be considered in order to provide the best possible service to interagency riders. With SMART not anticipating to provide funding for local bus transit, extensive analysis will be required to ascertain how much additional SMART-focused service can be provided without reducing service to other routes.

Estimated Completion Date: December 2016

Transit Operator: City of Petaluma

Project Title: Adopt a Transit Asset Management Plan (TAM)   *(NEW)*

Project Goal: Better manage transit asset and comply with Federal law.

Project Description: Petaluma Transit will coordinate with MTC and its regional efforts to adopt a Transit Asset Management Plan for small transit operators.

Estimated Completion Date: September 2018

Transit Operator: Santa Rosa

Project Title: Implement Reimagining CityBus   *(NEW)*

Project Goal: The Reimagining CityBus project has redesigned the existing fixed-route system with extensive public input making it more frequent and direct service. The City will advertise, promote and implement the Reimagining CityBus project.

Project Description: "Reimagining Santa Rosa CityBus" is the first comprehensive re-design of Santa Rosa's transit system in over 25 years. It is a complete redesign pf the CityBus system with improved more frequent and more direct service. Staff will expand awareness of this reimagined CityBus service through an expansive, enthusiastic, coordinated marketing campaign. This newly designed system operates 15-minute service on the major corridors with strong anchor points at both ends making travelling throughout the city much easier and faster. It will provide excellent service to major shopping areas, local schools, the junior college, the SMART station, businesses and major medical facilities.

Estimated Completion Date: April 2017

Transit Operator: Santa Rosa

Project Title: Implement Paratransit Efficiency Recommendations Tier One

Project Goal: Implement Council-approved recommendations for increasing efficiency of paratransit service delivery to improve the level of paratransit service utilizing existing resources.

Project Description: This project involves implementation and monitoring of Paratransit efficiency review tier one recommendations focused on reducing demand during peak service hours, including:1)Reducing level of subscription trips through the implementation of a moratorium on new requests 2) Negotiating requested trip times 3) Reducing level of demand for

paratransit service to Earle Baum Center for the Blind 4) Limiting level of paratransit service to the Oakmont Community.

Estimated Completion Date: July 2017

Transit Operator: Sonoma County

Project Title: Adopt Transit Asset Management Plan

Project Goal: Better manage transit assets

Project Description: Sonoma County Transit will coordinate with MTC and its regional efforts to adopt a Transit Asset Management Plan for smaller transit operators.

Estimated Completion Date: September 2018