

Metropolitan Transportation Commission Programming and Allocations Committee

February 13, 2019

Agenda Item 3c

Transit Sustainability Project (TSP)

Subject: Transit Sustainability Project (TSP) Performance Report Update

Background: In May 2012, in the wake of the Great Recession, the Commission adopted final recommendations for the TSP (MTC Resolution No. 4060) to achieve continued service and cost control improvements by Bay Area transit agencies. These adopted policies establish performance measures and targets for the largest seven Bay Area transit operators. Each operator is to achieve a five percent (5%) reduction by FY2016-17 in one of three performance measures, with no growth beyond the Consumer Price Index (CPI) thereafter. These measures are:

- a) Cost Per Vehicle Service Hour;
- b) Cost Per Passenger; and
- c) Cost per Passenger Mile.

In 2013, each transit operator adopted a strategic plan that describes how the agency intends to meet one or more of the performance targets. Since then, MTC has been annually monitoring each operator's progress towards meeting the TSP targets using National Transit Database (NTD) data. 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 FY 2016-17 data and is also the deadline for operators to achieve the TSP target. In FY 2016-17, four of the seven operators achieved a 5% reduction against the baseline in at least one of the metrics; GGBHTD, SFMTA, and VTA did not (see Attachment 1). Nonetheless, all operators have met the metric at some point over the five-year analysis period. Most operators are achieving the 5% performance target due to strong ridership gains in past years and by keeping costs steady. Achieving *both* higher ridership and better cost control is the key to a more sustainable future for Bay Area public transit.

Per the adopted TSP policy (see Attachment 2), MTC staff may make recommendations on conditioning existing and new operating and capital funding administered by MTC for operators that do not achieve the TSP target. Staff finds that most agencies have been responsive and have aligned costs with productivity, but that agencies are beginning to see ridership declines – in some cases of significant magnitude.

Through another element of the TSP, the Transit Performance Initiative, MTC has invested approximately \$150 million in projects and programs geared to increasing ridership and improving service (see Attachment 3). The program has had mixed results but as more projects are completed, more data will be available to refine the program approach.

Despite past efforts, however, it is apparent the operating climate of the transit industry is changing and may affect transit operators' ability to continue their current service models. Rather than link operators' performance to funding, staff proposes to launch a cooperative effort with the transit operators to address issues affecting the industry as a whole and Bay Area operations in particular. The transit

ridership study underway by UCLA researchers is one example; other areas could include service design and coordination, first/last mile coordination, and improving transit speeds.

The attached presentation includes findings and results of the TSP and proposed next steps.

Issues:

GGBHTD: In March 2017, GGBHTD took over the operations of the existing Tiburon Commute service from Blue and Gold. With the Tiburon service, GGBHTD also inherited legacy inefficiencies and in future years will be working on making the service more efficient. GGBHTD staff has requested that MTC make an adjustment to remove this service from GGBHTD's data. Doing so would mean that the agency meets the TSP metric requirement, with a result of -5.2% cost per hour reduction. However, MTC staff does not agree with making adjustments as this is a slippery slope that could result in similar adjustments needed each year for every operator.

SFMTA: This year, SFMTA is very close to meeting the cost per hour metric. SFMTA has increased service and ridership has been holding steady. The agency believes other shared use options have affected ridership. SFMTA has focused on improving service quality and reliability by investing in service increases, state of good repair and safety. Such investments do not typically result in lowering cost per passenger or passenger mile in the short-term.

VTA: In past years, VTA met the cost per passenger mile metric. Double digit percentage decreases in ridership, coupled with slightly increased operating costs, appear to be driving VTA's inability to meet the TSP metrics this year. VTA's new bus service plan is on hold and will be rolled out with the opening of the new BART Berryessa service, which has been delayed for months.

Recommendation: Information Item.

Attachments: Attachment 1 – Large Operators – TSP Performance Metric Summary
Attachment 2 – MTC Resolution No. 4060 Excerpt
Attachment 3 – TPI Investment and Incentive Program Summary Project Lists
Attachment 4 – Powerpoint Presentation

Attachment 1
MTC TSP FY 2016-17 Performance Metric Results
February 13, 2019

OPERATING COST PER VEHICLE SERVICE HOUR

Transit Operator	Baseline Highest Year		Assessment Year	Percent Change from Highest	FY2016-17 Target (a)
	Year	Performance	FY2016-17	FY2016-17	
AC Transit	FY2010-11	\$182.56	\$180.82	-1.0%	\$173.43
BART	FY2009-10	\$298.99	\$277.70	-7.1%	\$284.04
Caltrain	FY2010-11	\$458.53	\$484.89	5.7%	\$435.60
GGBHTD (b)	FY2010-11	\$375.71	\$361.21	-3.9%	\$356.93
SFMTA	FY2009-10	\$220.49	\$210.96	-4.3%	\$209.46
SamTrans	FY2008-09	\$213.80	\$157.75	-26.2%	\$203.11
VTA	FY2010-11	\$200.29	\$199.80	-0.2%	\$190.28

OPERATING COST PER PASSENGER

Transit Operator	Baseline Highest Year		Assessment Year	Percent Change from Highest	FY2016-17 Target (a)
	Year	Performance	FY2016-17	FY2016-17	
AC Transit	FY2008-09	\$6.34	\$7.62	20.2%	\$6.02
BART	FY2008-09	\$5.24	\$4.77	-8.8%	\$4.97
Caltrain	FY2009-10	\$9.45	\$6.83	-27.7%	\$8.97
GGBHTD	FY2010-11	\$16.65	\$18.05	8.4%	\$15.82
SFMTA	FY2009-10	\$3.52	\$3.62	2.8%	\$3.35
SamTrans	FY2010-11	\$9.26	\$10.61	14.6%	\$8.80
VTA	FY2009-10	\$8.07	\$9.75	20.9%	\$7.67

OPERATING COST PER PASSENGER MILE

Transit Operator	Baseline Highest Year		Assessment Year	Percent Change from Highest	FY2016-17 Target (a)
	Year	Performance	FY2016-17	FY2016-17	
AC Transit	FY2009-10	\$2.17	\$1.95	-10.2%	\$2.06
BART	FY2008-09	\$0.42	\$0.35	-16.4%	\$0.40
Caltrain	FY2007-08	\$0.39	\$0.32	-16.8%	\$0.37
GGBHTD	FY2008-09	\$1.19	\$1.19	0.5%	\$1.13
SFMTA	FY2009-10	\$1.68	\$1.74	3.4%	\$1.60
SamTrans	FY2010-11	\$1.93	\$2.52	30.4%	\$1.85
VTA	FY2009-10	\$1.71	\$1.86	8.8%	\$1.62

Note: shading indicates five percent or greater real reduction in performance

(a) Equals five percent reduction from baseline highest year in FY2016-17 dollars.

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Attachment 2- Excerpt from MTC Resolution No. 4060 (May 23, 2012)

MTC Resolution No. 4060 (Excerpt)

Performance and Investment Policies

Performance Measures and Targets

To monitor the performance of the seven largest transit agencies in the Bay Area, the Commission establishes the following TSP performance target, measures, and monitoring process:

Performance Target

5% real reduction in at least one of the following performance measures by FY2016-17 and no growth beyond CPI thereafter. To account for the results of recent cost control strategies at agencies, the baseline year will be set at the highest cost year between FY2007-08 and FY2010-11.

Performance Measures

- Cost Per Service Hour*
- Cost Per Passenger*
- Cost Per Passenger Mile*

**As defined by the Transportation Development Act*

Monitoring Process

In FY2012-13, agencies are to adopt a strategic plan to meet one or more of the targets and submit to MTC.

On an annual basis, starting in FY2013-14, the transit agencies submit performance measure data on all three targets to MTC.

In FY2017-18, MTC will analyze agency progress in meeting target

In FY2018-19, MTC will link existing and new operating and capital funds administered by MTC to progress towards achieving the performance target.

The following agencies, the largest seven transit agencies in the Bay Area, are subject to the performance measures and targets: AC Transit; BART, Caltrain, Golden Gate Transit, SFMTA, SamTrans, and Santa Clara VTA.

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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	\$7.0
	N-Judah Customer First	\$3.8
	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

*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 Pocket Track Light Rail Interlocking	\$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	\$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
TPI Program Grand Total		\$86.2

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Transit Performance Initiative (TPI) - Incentive Program
FY 2012-13 through FY 2016-17

Transit Performance Initiative (TPI) Incentive Program	Implementing Agency	Total OBAG 1
TPI - AC Transit Spectrum Ridership Growth	AC Transit	\$1,802,676
TPI - AC Transit - East Bay Bus Rapid Transit	AC Transit	\$4,547,305
TPI - LAVTA - Wheels Marketing Initiatives	LAVTA	\$423,798
TPI - ACE Positive Train Control	SJRRRC/ACE	\$502,214
TPI - Union City - South Alameda County Major Corridors Travel Time Imps	Union City	\$160,587
TPI - CCCTA - 511 Real-Time Interface	CCCTA	\$100,000
TPI - CCCTA - Implementation of Access Improvement	CCCTA	\$685,196
TPI - CCCTA - Remix Software Implementation	CCCTA	\$35,451
TPI - ECCTA - Non-ADA Paratransit to Fixed Route Program	ECCTA	\$817,297
TPI - WCCTA - Purchase of Automatic Vehicle Locator System	WCCTA	\$344,513
TPI - GGBHTD - Building Ridership to Meet Capacity Campaign	GGBHTD	\$387,440
TPI - GGBHTD - Regional Customer Study: On-Board Bus and Ferry Surveys	GGBHTD	\$402,572
TPI - Marin Transit Preventive Maintenance (for low income youth pass)	Marin Transit	\$99,289
TPI - MCTD Preventative Maintenance (Youth Pass Program)	Marin Transit	\$239,808
TPI - Relocate Transit Maintenance Facility (PE only) (Youth Pass Program)	Marin Transit	\$122,249
TPI - NVTA - Am. Canyon Priority Signal Interconnection on SR 29	NVTA	\$91,757
TPI - NVTA - Bus Mobility Device Retrofits	NVTA	\$120,988
TPI - NVTA - Imola Ave and SR 29 Express Bus Improvements	NVTA	\$96,058
TPI - BART Train Car Accident Repair	BART	\$1,493,189
TPI - BART - Metro Priority Track Elements	BART	\$3,459,057
TPI - BART - Concord Shop Wheel Truing	BART	\$7,165,450
TPI - Caltrain - Off-peak Marketing Campaign	Caltrain	\$44,200
TPI - WETA - Central Bay Operations and Maintenance	WETA	\$1,325,466
TPI - BART 24th Street Train Control Upgrade	BART	\$2,000,000
TPI - SFMTA Light Rail Vehicle Rehabilitation	SFMTA	\$5,120,704
TPI - SFMTA - Light Rail Vehicle (LRV) Propulsion System	SFMTA	\$9,285,937
TPI - SFMTA Preventive Maintenance (for low income youth pass)	SFMTA	\$1,600,000
TPI - SFMTA Light Rail Vehicle Overhaul	SFMTA	\$5,337,401
TPI - Caltrain - Control Point Installation	Caltrain	\$1,802,415
TPI - Caltrain - Postitive Train Control	Caltrain	\$2,332,747
TPI - SamTrans - Preventative Maintenance (Service Plan Implementation)	SMCTD	\$1,344,917
TPI - VTA Preventive Maintenance (for low income fare pilot)	VTA	\$1,302,018
TPI - VTA - Montague Expressway Pedestrian Bridge at Milpitas BART	VTA	\$2,768,555
TPI - Fairfield - Expand bus service between Fairfield and Vacaville	Fairfield	\$372,216
TPI - Fairfield - SolanoExpress Service Vehicle Replacement (for SolanoExpress Bus Stop Imps)	Fairfield	\$333,719
TPI - SolTrans - 40' Electric Bus Purchase & Hybrid-Diesel Bus Replacement	SolTrans	\$399,223
TPI - Petaluma - Transit Signal Priority, Phase I, II & III	Petaluma	\$378,692
TPI - Santa Rosa - CityBus COA and Service Plan	Santa Rosa	\$100,000
TPI - Santa Rosa - Reimagining CityBus Implementation	Santa Rosa	\$682,177
TPI - Sonoma County Transit - 30-foot CNG Bus Replacements	Sonoma County	\$173,052
TPI - Sonoma County Transit - 40-foot CNG Bus Replacements	Sonoma County	\$199,667
SUBTOTAL		\$60,000,000

Source of Information:
Resolution No. 4035, Attachment B-1
OBAG 1 Regional Programs
September 2018



Transit Sustainability Project

Five-Year Assessment
February 2019

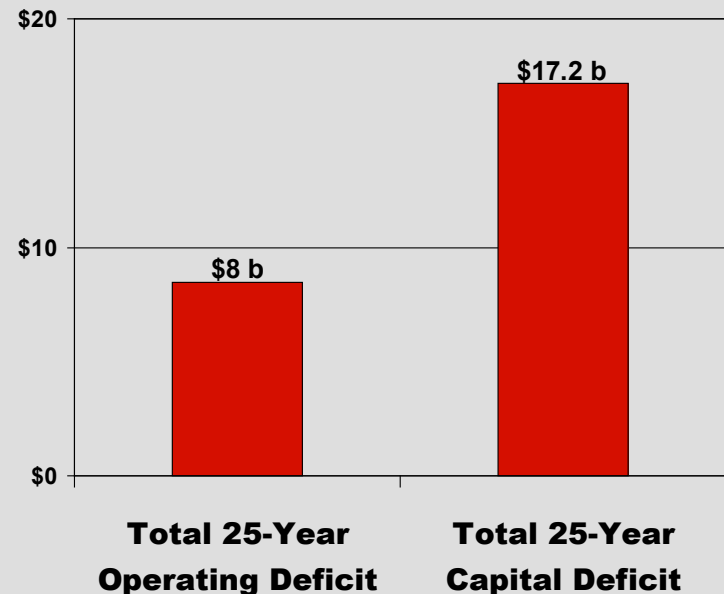


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TSP Origin Story: Financial Challenges of Great Recession

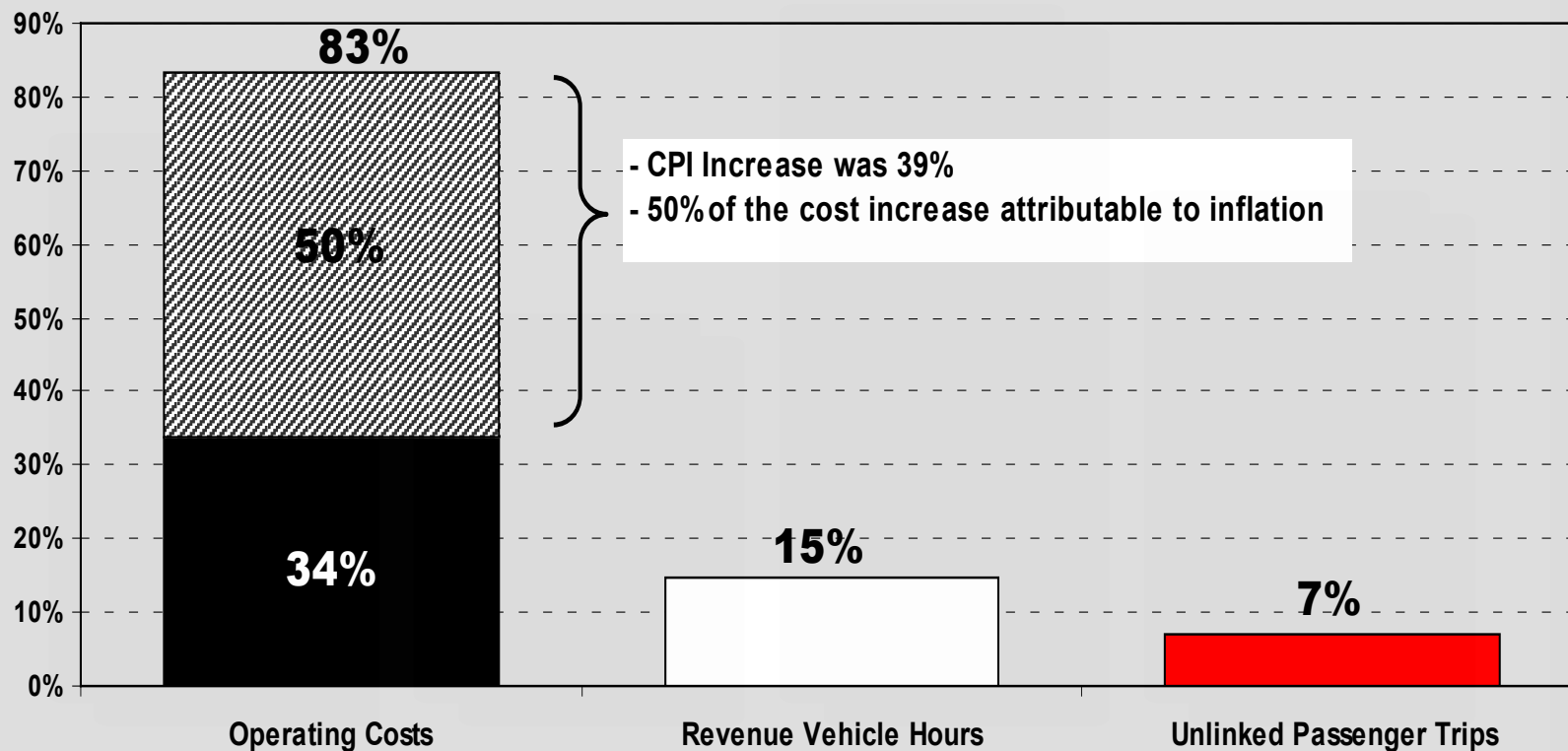


Projected Deficits Transportation 2035



TSP Context: Percent Change in Cost and Performance Indicators for Large Ops (1997 – 2008)

- Transit Sustainability Project Initiative: 2009 - 2012
- Goal: to reverse trend and achieve cost increases in line with ridership and service increases



Source: National Transit Database, "Big 7" only.
Excludes ferry, cable car and paratransit.

TSP Requirements and Actions

- Annual monitoring of performance metrics, operators to meet targets by FY2016-2017
- Strategic plans and annual updates
- Follow-on studies:
 - Inner East Bay Fares
 - Tri-City/Tri-Valley Service Planning
 - SMART/North Bay Bus Coordination
- TPI Incentive and Investment programs: \$150M to fund operating and capital improvements
 - \$86 million over 5 grant cycles, ongoing
 - \$60 million over 4 years (\$15 annually), suspended

TSP Performance Measures - Summary of Results

FY 2016-17 Assessment

Transit Operator	Percent Change from Highest Baseline Year in FY 2016-17 (a)		
	Cost per Vehicle Service Hour	Cost Per Passenger	Cost Per Passenger Mile
AC Transit	-1.0%	20.2%	-10.2%
BART	-7.1%	-8.8%	-16.4%
Caltrain	5.7%	-27.7%	-16.8%
GGBHTD*	-3.9%	8.4%	0.5%
SFMTA	-4.3%	2.8%	3.4%
SamTrans	-26.2%	14.6%	30.4%
VTA	-0.2%	20.9%	8.8%

* Results represent a consistent methodology for all operators. However, if an adjustment is made to remove the newly acquired Tiburon Commute service from GGBHTD's FY 2016-17 data, the agency meets the cost per hour metric (at -5.2%).

Five Year Performance Summary

Historical Performance in 1 or more of metrics				
FY 12-13	FY 13-14	FY 14-15	FY 15-16	FY 16-17
✓	✓	✓	✓	✓
✓	✓	✓	✓	✓
✓	✓	✓	✓	✓
✓	✓	✓	✓	*
✓	✓			
	✓	✓	✓	✓
✓	✓	✓	✓	

Key Findings

- Generally, performance goals are being met
- All operators met metric at some point over five year period

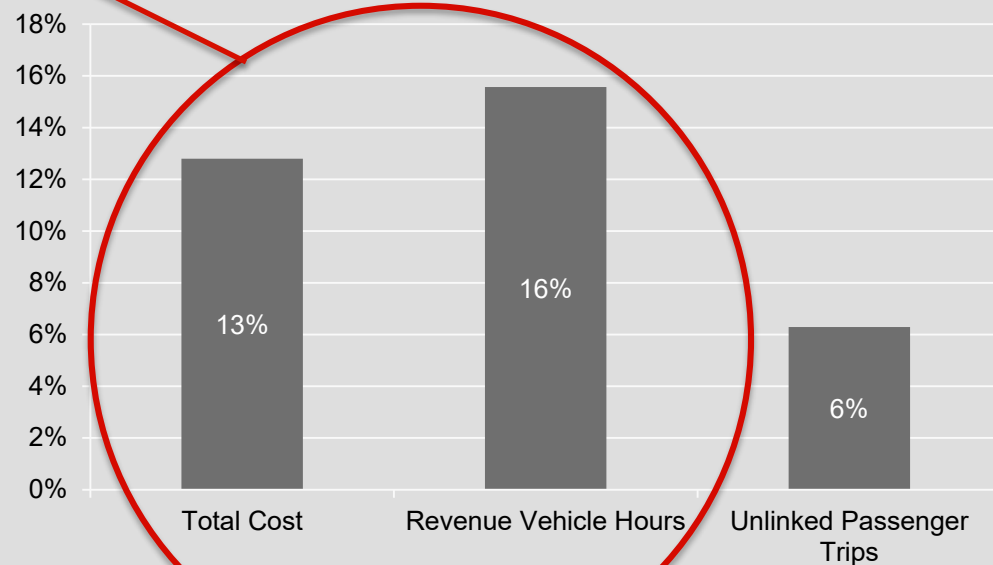
Overall Trends from 2011 to 2017

Good News...

2010 – Region was concerned about spiraling costs outpacing service improvements.

2018 – Most agencies have been responsive and have aligned costs with productivity.

7 Large Operators* Percent Change from 2011 to 2017 (in \$2017)



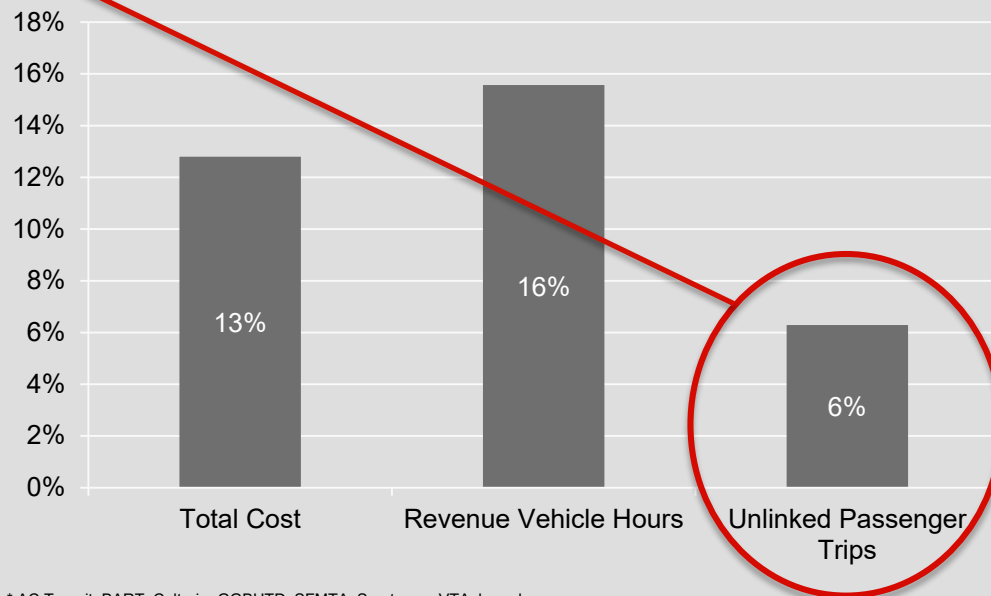
* AC Transit, BART, Caltrain, GGBHTD, SFMTA, Samtrans, VTA, based on NTD data 12/12/18

Overall Trends from 2011 to 2017

Bad News...

- Overall ridership levels are declining, generally affecting bus systems more than rail.
- MTC invested nearly \$150 million to improve service and productivity but challenges remain.
- Challenges have changed over time: ridership is now main concern

7 Large Operators* Percent Change from 2011 to 2017 (in \$2017)



* AC Transit, BART, Caltrain, GGBHTD, SFMTA, Samtrans, VTA, based on NTD data 12/12/18

Current external factors impacting transit industry

- Housing affordability and cost of living
- Urban/ HOV Traffic congestion; transit travel time increases
- Changes in modes of commuting

Housing Affordability and Jobs/ Housing Balance

Questions:

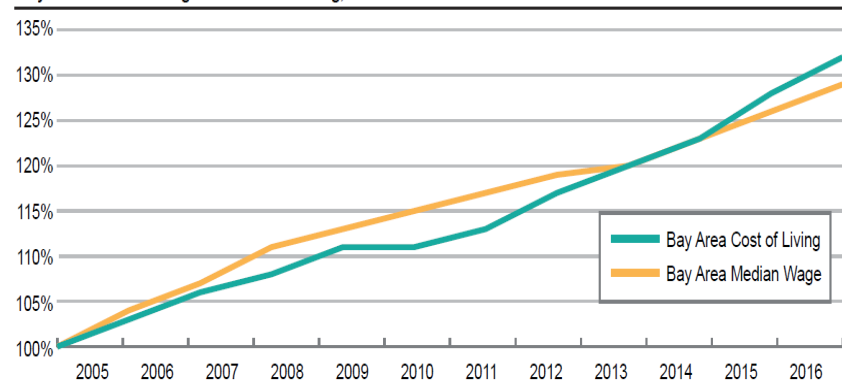
- What is the impact of housing costs on transit ridership?
 - Have transit riders moved out of the region altogether and non-transit riders in the region increased?
 - Are riders moving to less expensive, more remote locations with poor transit access (and shifted to drive or other modes)?
- How have land use decisions at the cities and counties impacted transit ridership or the ability to provide efficient transit?

Labor Force - Affected by Cost of Living

- Industry-wide labor shortage, may impact ridership by straining service
- Locally, operators are experiencing labor shortages
 - SFMTA –1,894 operators hired, but requires 2,305 operators (SF BLA Office).
 - WCCTA provided additional funds to contractors to increase the driver and staff wage scales to address severe driver shortages
- Paratransit (various operators) –
 - Contractors having difficulty hiring and retaining drivers
 - Operators are being asked to increase contracts to help fund higher wages to attract enough drivers

The Bay Area's cost of living is now rising more steeply than its median wage increase.

Bay Area Growth in Wages and Cost of Living, Indexed to 2005



Sources: BLS Occupational Employment Statistics and Consumer Price Index; Zillow Home Value Index, All Homes
Analysis: Bay Area Council Economic Institute

Congestion Increases in Region are Affecting Transit

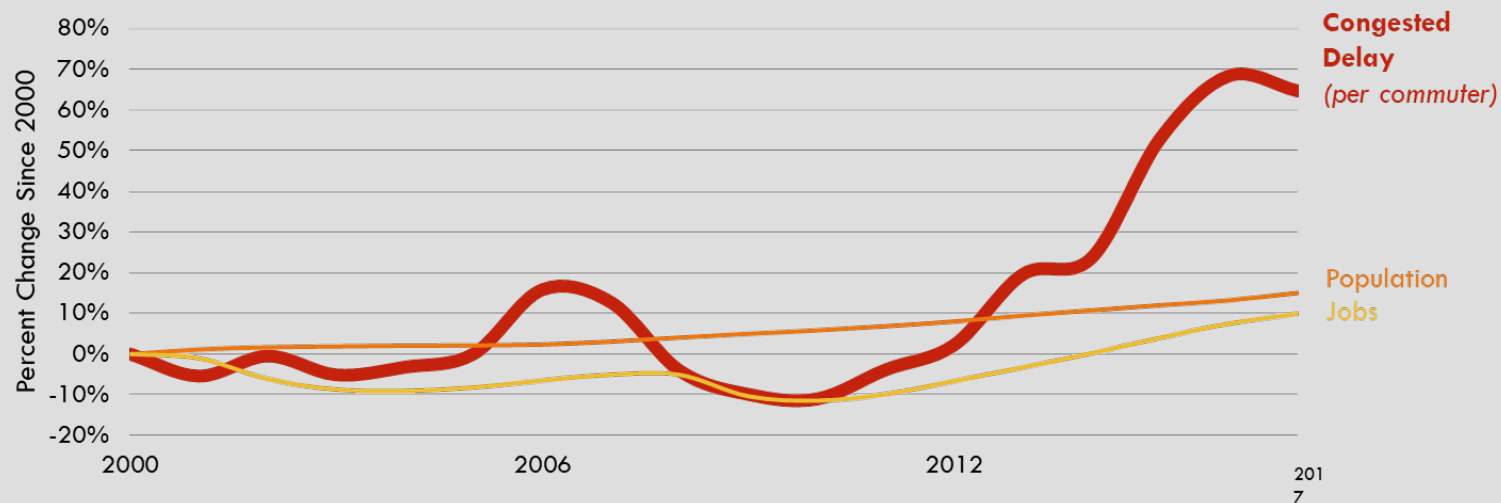


TIME SPENT IN CONGESTION

REGIONAL PERFORMANCE

Congestion has outpaced growth in population and jobs, increasing 64 percent since 2000.

CHANGE SINCE 2000 – POPULATION, JOBS AND TIME SPENT IN CONGESTION



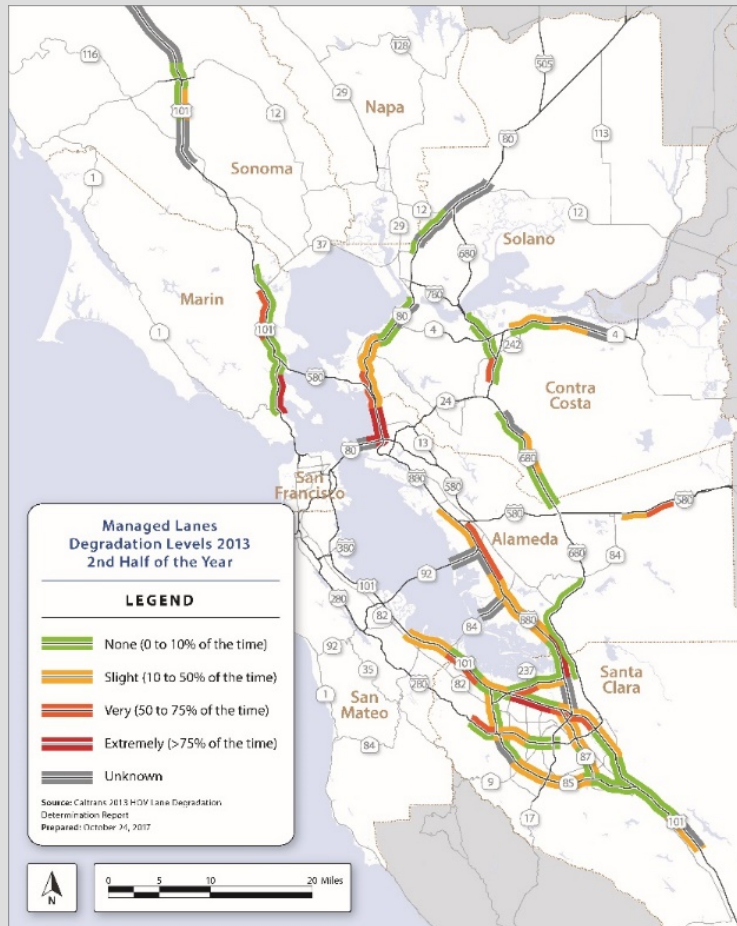
Source: California Employment Development Department; California Department of Finance; INRIX/MTC Analysis



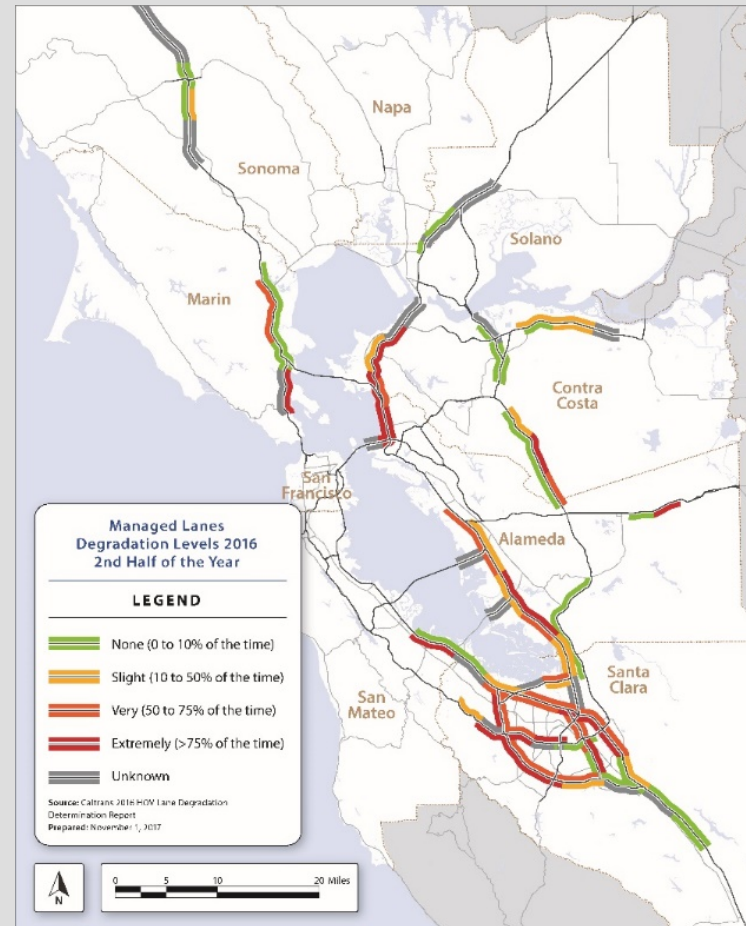
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HOV Degradation Increasing in Rate and Severity

2013 Degradation



2016 Degradation



Federal Standard: maintain an average speed of 45 mph at least 90 percent of the time during the peak hour over a consecutive 180-day period.

Transbay Corridor Capacity/Demand (including Prerequisite Projects)

Transbay Corridor

Existing Conditions

Westbound to SF Core
AM Peak Hour

10,000 People in Cars

29,000 Transit Trips

2,700 AC Transit & WestCAT bus

25,000 BART

1,300 WETA ferry

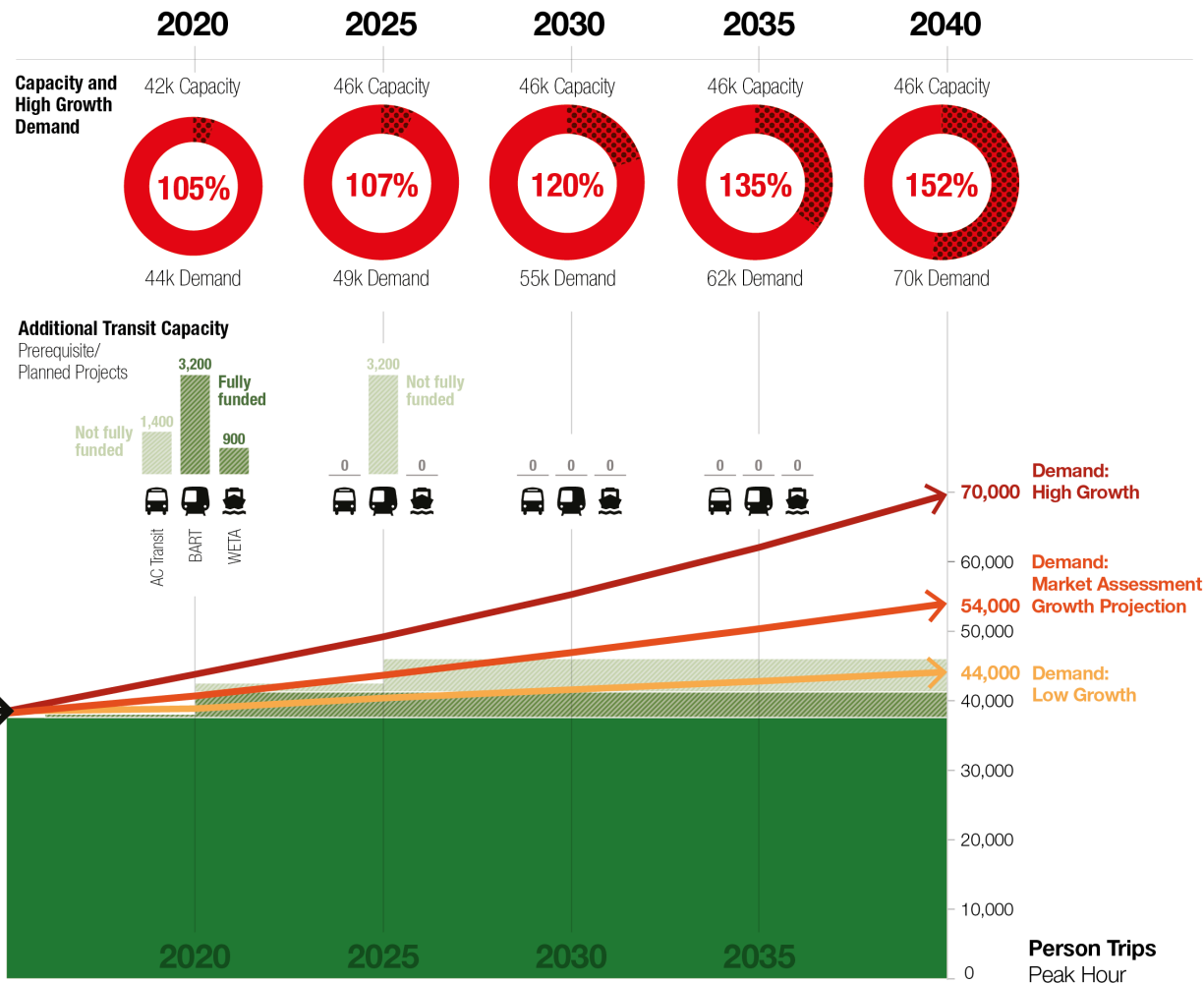
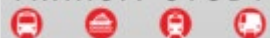
2015

37k Capacity

105%

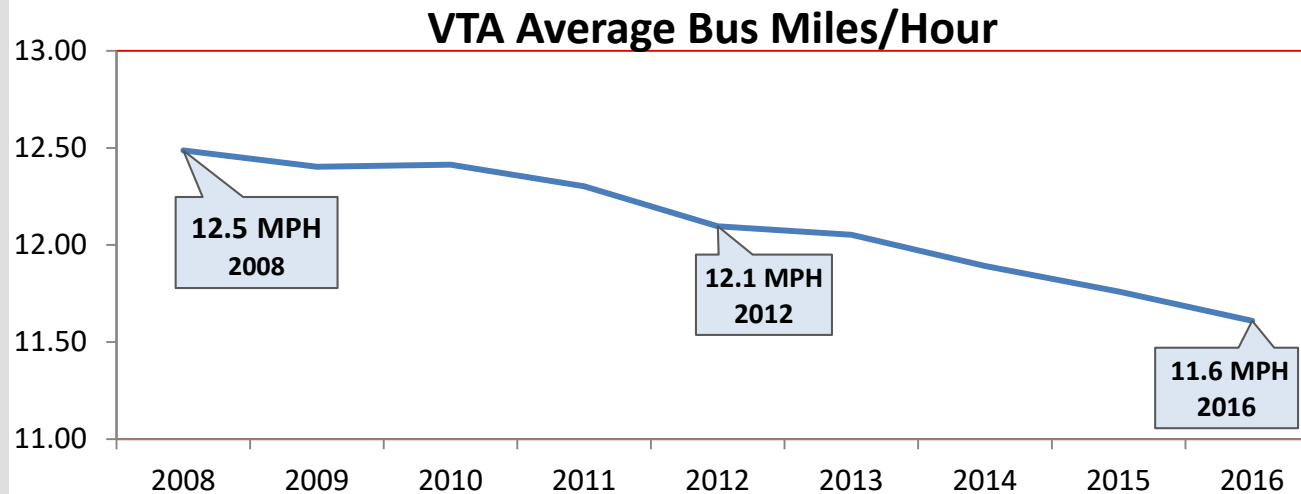
39k Demand

**CORE CAPACITY
TRANSIT STUDY**



**TRANSIT
SUSTAINABILITY
PROJECT**

Transit Speed – VTA Example



Slowing Routes Require More Buses

Buses needed for 15-minute service on Route 22

1995

15.7 MPH



15 Buses

2018

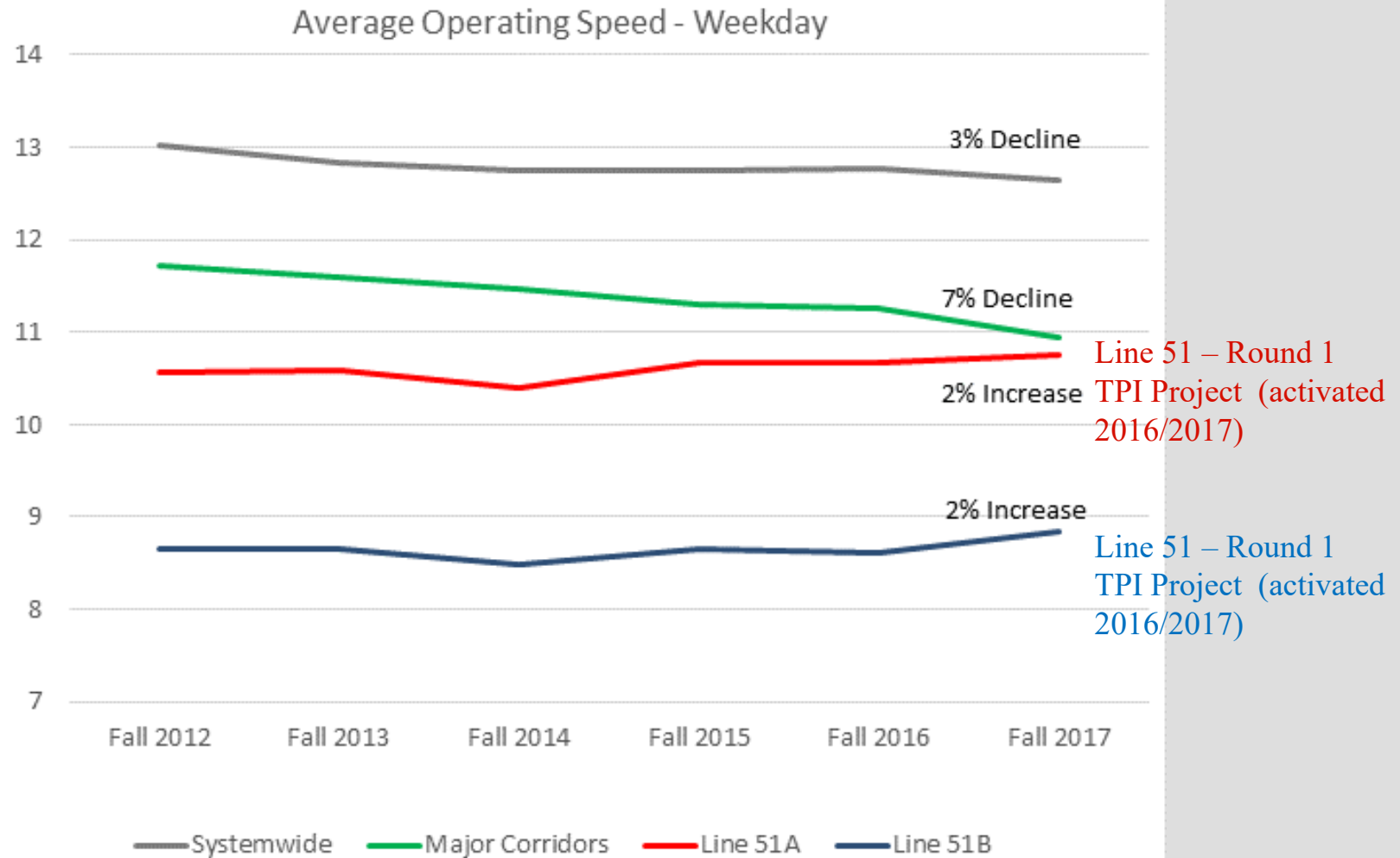
10.3 MPH



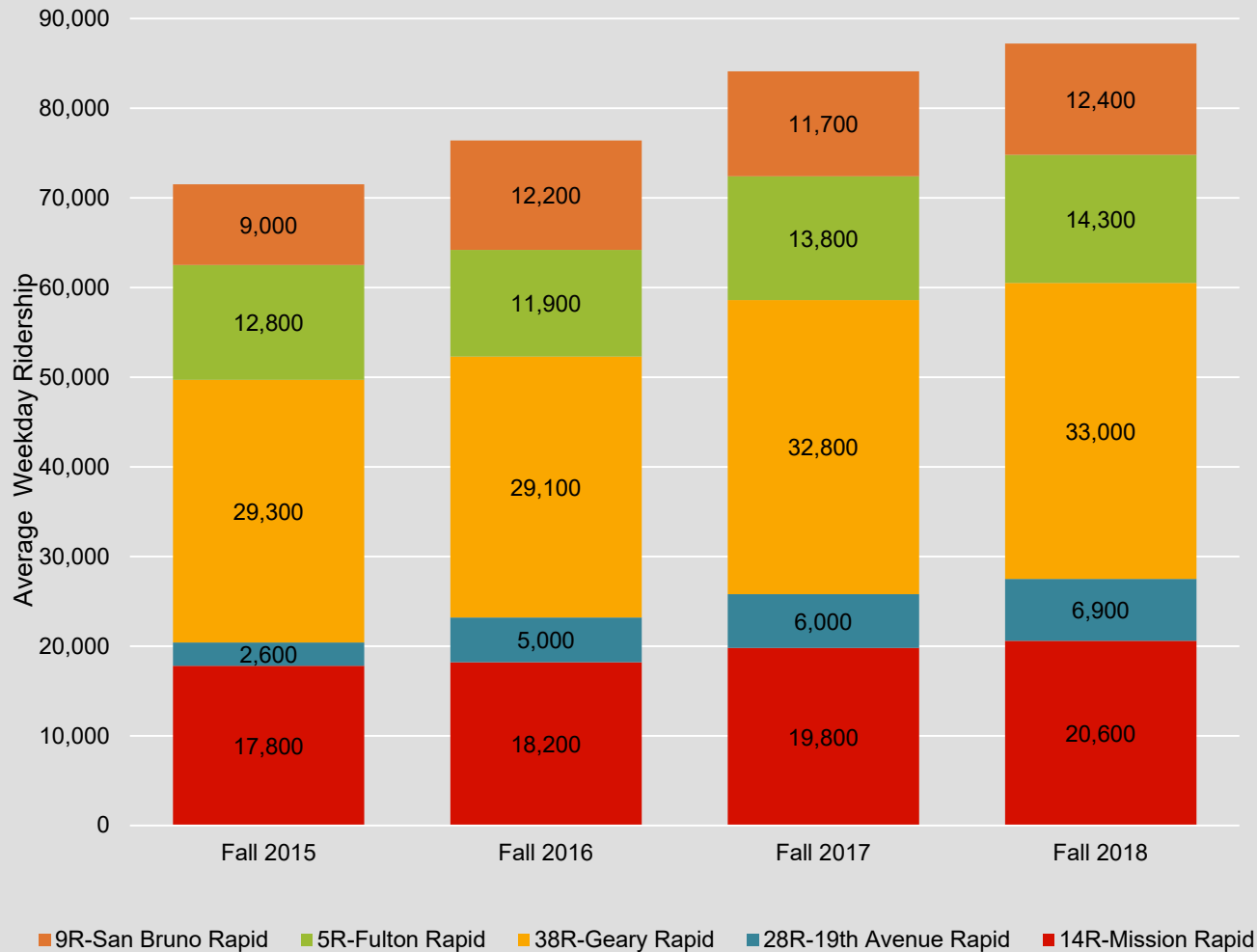
22 Buses



Transit Speed – AC Transit Example



SFMTA: Rapid Ridership Growing



Since 2015, ridership on the Rapid Network has increased **22%**.

Added capacity and increased frequencies on rapid routes has not only brought new riders but also shifted demand from Local to Rapid service.

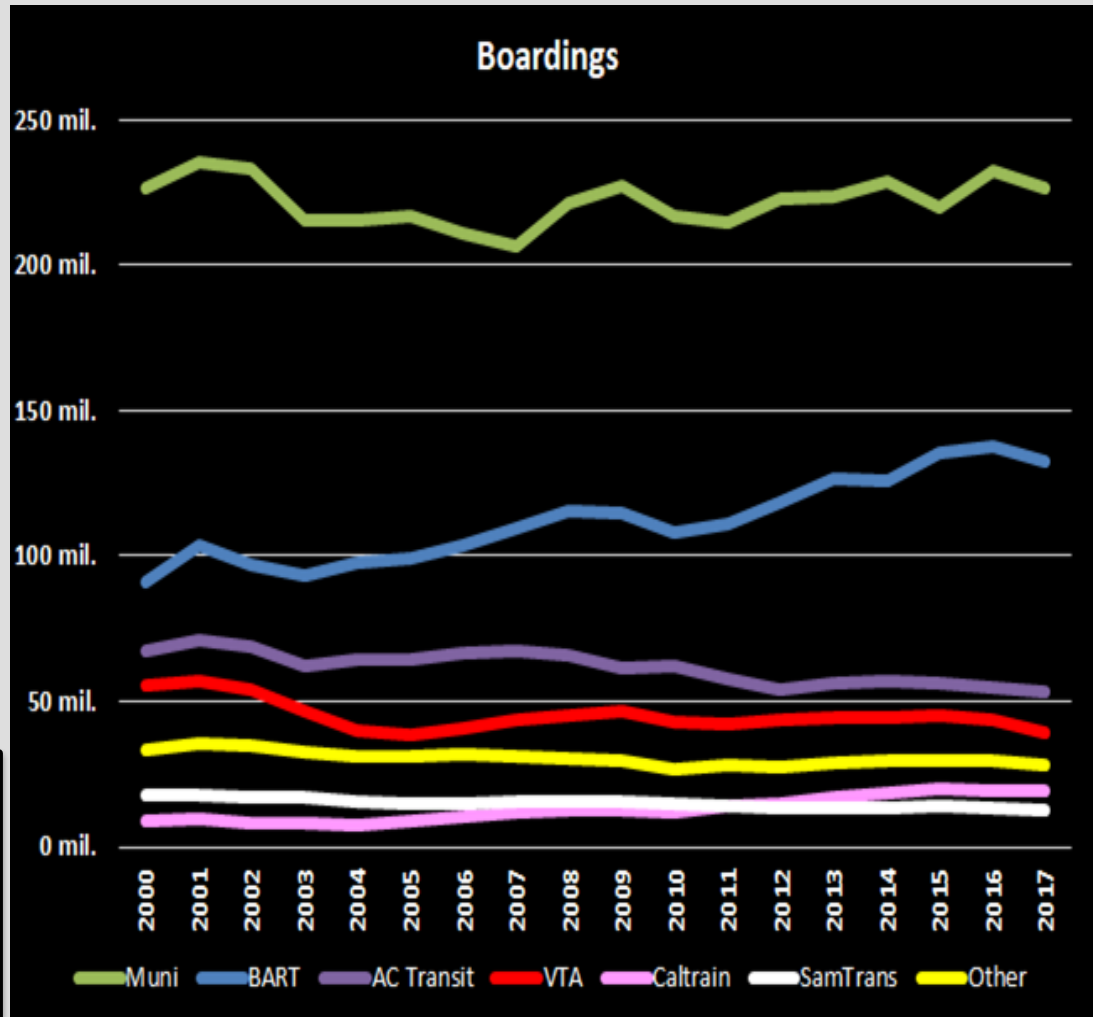
Ridership Trends and Observations

Bay Area Transit Use Study (UCLA Partnership):

- How and where is transit use changing?
- How is transit service changing, or not changing?
- How are transit riders changing?

Mode Share Observations:

- In SF, TNC use increased from 0% in 2012 to 4% in 2017
- Regionwide, telecommuting is on the rise: 4% in 2000 to 6.3% in 2016



Performance Measures Proposal

In place of financial consequences related to performance targets, launch a cooperative effort that brings together focused efforts:

- 1) Improve financial position
 - Maintain progress on aligning costs with productivity; stay vigilant
 - Proactively address labor challenges
- 2) Improve service for the customer and attract new riders
 - Continue operator-led service planning assessments
 - Transit Use Study (UCLA led, underway)
 - First/ Last Mile and integration of Mobility as a Service
 - Coordination of fares, schedules, mapping
 - Implement steps to speed up bus trips:
 - Support local projects to improve speed
 - HOV lanes
 - Pricing

Next Steps

Spring/Summer 2019:

Collaborate with Transit agencies to evaluate issue areas

Summer/Fall 2019:

Continue annual TSP performance monitoring

Late 2019:

- Hold a Transit Sustainability Workshop
- Evaluate Implications for Plan Bay Area