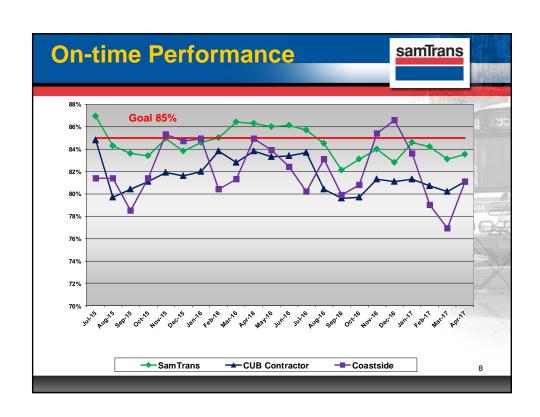
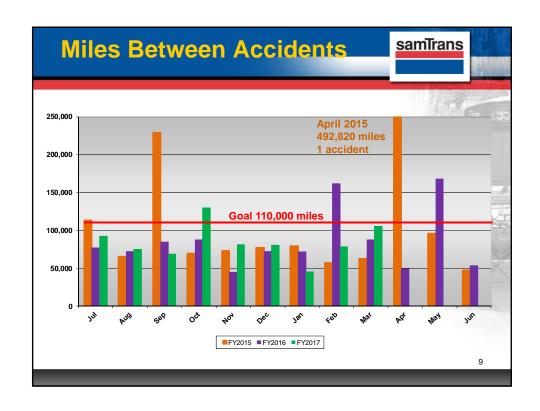
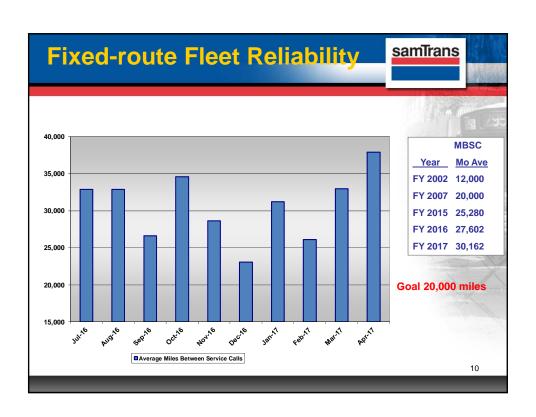


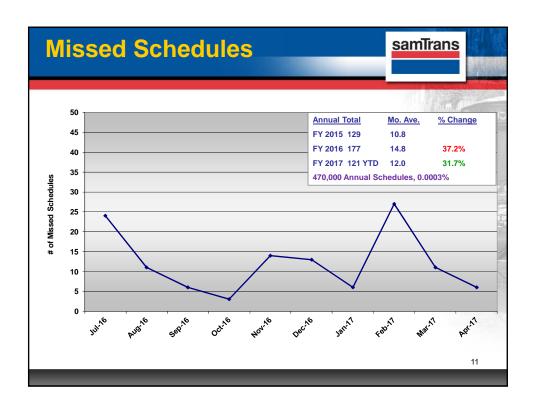
Bus Ridersh	ip Com	parison	samī	rans
VTD Due Diderehin	for 0 mont	he ended Mer	ole (coo)	
YTD Bus Ridership				
	FY 2016	FY 2017	<u>Decrea</u>	
SamTrans	9,984	9,206	-778	-7.8%
A/C Transit	38,535	37,741	-794	-2.1%
GGBHTD/Marin	4,924	4,464	-460	-9.3%
Sacramento RTD	9,212	8,070	-1,142	-12.4%
San Diego	48,370	41,680	-6,690	-13.8%
San Francisco Muni	125,552	114,299	-11,253	-9.0%
Santa Clara VTA	24,736	22,097	-2,639	-10.7%
Austin, TX	23,561	22,104	-1,457	-6.2%
Minneapolis-St. Paul	54,168	52,559	-1,609	-3.0%
New York City	585,728	560,430	-25,298	-4.3%
Seattle, WA	119,286	117,774	-1,512	-1.3%
National	7,649,663	7,351,655	-298,008	-3.9%

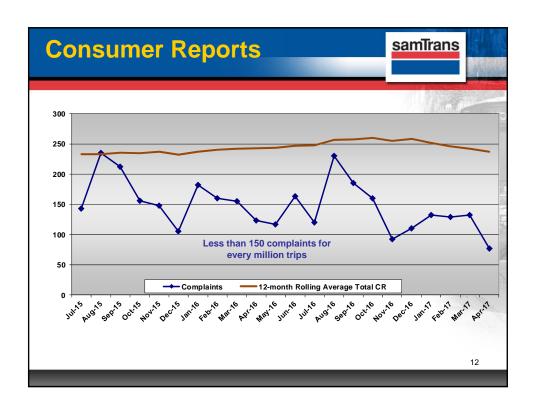
<b>Bus Riders</b>	hip Com	parison	samī	rans
	_		_	
YTD Bus Ridershi	p for 9-mont	hs ended Mar	ch (000)	m pur
	FY 2013	FY 2017	Decrea	se
SamTrans	9,554	9,206	-348	-3.6%
A/C Transit	40,898	37,741	-3,157	-7.7%
GGBHTD/Marin	4,954	4,464	-490	-9.9%
Sacramento RTD	10,145	8,070	-2,075	-20.5%
San Diego	47,268	41,680	-5,588	-11.8%
San Francisco Mun	i 119,009	114,299	-4,710	-4.0%
Santa Clara VTA	24,441	22,097	-2,344	-9.6%
Austin, TX	26,138	22,104	-4,034	-15.4%
Minneapolis-St. Paเ	ıl 60,929	52,559	-8,370	-13.7%
New York City	593,455	560,430	-33,025	-5.6%
Seattle, WA	112,892	117,774	+4,882	+4.3%
National	7,645,669	7,351,655	-294,014	-3.8%

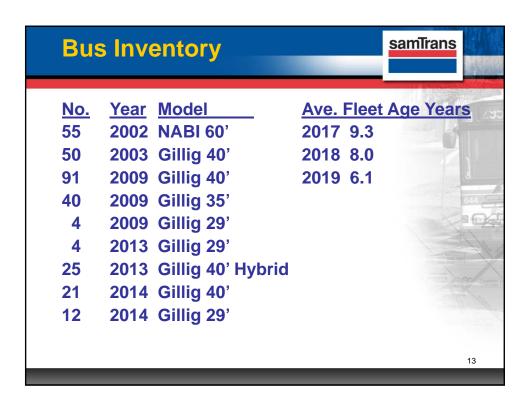














## **Emission Reductions**

samTrans

### **Urban Bus Rule 1999**

- Implications
- Strategies, demonstrations
  - VTA 2004 3 Hydrogen fuel cell buses
  - AC Transit 2007 12 Hydrogen Hybrid fuel cell buses

<b>Reductions:</b>	<b>Baseline 2002</b>	2017	% reduced
	g/bhp-hr	g/bhp-hr	
NOx	1,691	359.50	79%
PM	57	3.03	95%

**Innovative Clean Transit** 

samTrans

## 2000 Fleet Rule for Transit Agencies adopted

- Required demonstration of zero-emission buses
- 2009 Air Resources Board Resolution 09-49
- Suspend implementation of purchase requirement
- Conduct technology assessment
- Set criteria for zero-emission bus purchase

### 2015 CARB "technology assessment"

 Battery and fuel-cell electric buses commercially ready for transit service

California Environmental Protection Agency

**O** Air Resources Board

16

## **Electric Bus Procurement**

samTrans

#### **Transition**

- Infrastructure (charging stations)
- Training for Bus Operators, Mechanics and 1st Responders
- Tooling and inventory
- Electric power supply contracts

#### **Opportunities**

- Clean power (zero emissions)
- · Smooth & quiet operation
- Estimated lower maintenance costs
- Extended range versatility & flexibility
- Path to autonomous vehicles



**Continuing Improvement** 

samTrans

## Improve efficiency by evaluating:

- Low performing routes
- Need for additional service
- New area service options
  - Express semi-express service
  - Pilot service (#399 Owl service to SFO, #78 to Woodside)
  - Express service/fares
- How service is provided
  - Service delivery by location
  - · Deadhead miles
  - Distribution of contracted services

18

# **Summary**

samTrans

- Service quality remains high
- National trend is representative of declining ridership
- SamTrans ridership decline is slowing
- New buses arriving
- Emissions reducing
- Continuing improvement
  - Partnership with TNCs
  - Match service to customer travel needs
  - Identify new service area opportunities
  - Evaluate fare structure and the possibility of express fares/service (2019)

19