

**SFMTA**

Municipal Transportation Agency



# **MUNI FLEET OVERVIEW**



March 3, 2009 | SAN FRANCISCO, CALIFORNIA

## Purpose

*To provide an overview of Muni's programs for fleet availability and long-term vehicle replacement.*

# Revenue Fleet Summary

<b>Mode</b>	<b>Vehicles</b>	<b>Facilities</b>	<b>Lines/ Routes</b>	<b>Daily Peak Requirement</b>
<b>LRV</b>	<b>151</b>	<b>Green Metro East Geneva</b>	<b>5</b>	<b>120</b>
<b>Historic Streetcar</b>	<b>46</b>	<b>Geneva</b>	<b>1</b>	<b>22</b>
<b>Cable Car</b>	<b>40</b>	<b>Cable Car Barn</b>	<b>3</b>	<b>27</b>
<b>Motor Coach</b>	<b>511</b>	<b>Flynn Kirkland Woods</b>	<b>54</b>	<b>385</b>
<b>Trolley Coach</b>	<b>313</b>	<b>Presidio Potrero</b>	<b>16</b>	<b>240</b>

# Cable Cars

Manufacturer	Vehicle	No. of Vehicles	Avg. Age (yrs)	Annual Mileage
Carter Bros./ Mahony Bros.	Powell cars	28	120	354,000
Carter Bros./ Mahony Bros.	California cars	12	120	131,000
<b>Total</b>		<b>40</b>		<b>485,000</b>

# Historic Streetcars

Manufacturer	Vehicle	No. of Vehicles	Avg. Age (yrs)	Annual Mileage
St. Louis car	SEPTA PCC	16	60	
St. Louis car	NJT PCC	11	60	
Fiat/Breda	Milan	10	80	
<b>Various (limited services)</b>		<b>9</b>	<b>Variou s</b>	
<b>Total</b>		<b>46</b>		<b>514,000</b>

# Light Rail Vehicles

<b>Manufacturer</b>	<b>Vehicle</b>	<b>No. of Vehicles</b>	<b>Avg. Age (yrs)</b>	<b>Mileage</b>
<b>Breda</b>	<b>Standard Light Rail</b>	<b>151</b>	<b>9</b>	<b>292,612</b>

## Long-Term Out of Service LRVs

<b>Vehicle Number</b>	<b>Date out of Service</b>
<b>1502</b>	<b>10.02.08</b>
<b>1451</b>	<b>07.01.08</b>
<b>1499</b>	<b>06.15.08</b>
<b>1428</b>	<b>05.15.08</b>
<b>1500</b>	<b>07.26.06</b>
<b>1429</b>	<b>12.17.04</b>
<b>1541</b>	<b>11.17.03</b>
<b>1435</b>	<b>07.02.03</b>

# Motor Coach

<b>Manufacturer</b>	<b>Type</b>	<b>No. of Vehicles</b>	<b>Avg. Age (yrs)</b>	<b>Mileage</b>
<b>Orion</b>	<b>30 ft Hybrid</b>	<b>30</b>	<b>1.5</b>	<b>52,084</b>
<b>Orion</b>	<b>40 ft Hybrid</b>	<b>56</b>	<b>1.5</b>	<b>60,346</b>
<b>Neoplan</b>	<b>60 ft Diesel</b>	<b>124</b>	<b>7</b>	<b>202,389</b>
<b>Neoplan</b>	<b>40 ft Diesel</b>	<b>205</b>	<b>8</b>	<b>253,763</b>
<b>NABI</b>	<b>40 ft Diesel</b>	<b>45</b>	<b>10</b>	<b>279,454</b>
<b>Gillig</b>	<b>40 ft Diesel</b>	<b>45</b>	<b>16</b>	<b>9,342</b>
<b>New Flyer</b>	<b>60 ft Diesel</b>	<b>6</b>	<b>18</b>	<b>346,647</b>
<b><i>Total</i></b>		<b><i>511</i></b>		

# Trolley Coach

<b>Fleet</b>	<b>Manufacturer</b>	<b>Vehicle</b>	<b>No. of Vehicles</b>	<b>Avg. Age (yrs)</b>	<b>Mileage</b>
<b>Trolley Coach</b>	<b>ETI</b>	<b>40 ft</b>	<b>240</b>	<b>6</b>	<b>133,009</b>
	<b>ETI</b>	<b>60 ft</b>	<b>33</b>	<b>6</b>	<b>155,634</b>
	<b>New Flyer</b>	<b>60 ft</b>	<b>40</b>	<b>16</b>	<b>279,247</b>
<b>Total</b>			<b>313</b>		

# Muni Revenue Fleet Facilities

Facility	Bldg. Area (Sq. Ft.)	Yard Area (Sq. Ft.)	Vehicle Storage Capacity per Design	Actual Vehicles Stored	Overflow
<b>Woods</b>	<b>157,700</b>	<b>158,000</b>	<b>183</b>	<b>226</b>	<b>43</b>
<b>Flynn</b>	<b>275,625</b>	<b>6,500</b>	<b>102</b>	<b>130</b>	<b>28</b>
<b>Kirkland</b>	<b>9,352</b>	<b>104,085</b>	<b>127</b>	<b>155</b>	<b>28</b>
<b>Potrero</b>	<b>101,510</b>	<b>155,366</b>	<b>75 (40 ft) 73 (60 ft)</b>	<b>75 (40 ft) 73 (60 ft)</b>	<b>0</b>
<b>Presidio</b>	<b>158,381</b>	<b>115,600</b>	<b>142</b>	<b>165</b>	<b>23</b>
<b>Green</b>	<b>200,00</b>	<b>127,600</b>	<b>80</b>	<b>94 LRVs 4 Historics</b>	<b>18</b>
<b>Geneva</b>	<b>22,042</b>	<b>88,000</b>	<b>50</b>	<b>42 Historics 29 LRVs</b>	<b>21</b>
<b>Metro East</b>	<b>180,000</b>	<b>175,000</b>	<b>100</b>	<b>28 LRVs</b>	<b>-72</b>
<b>Cable Car Barn</b>	<b>81,000</b>	<b>37,700</b>	<b>40</b>	<b>40</b>	<b>0</b>

# Vehicle Improvement Program (VIP)

- Reliability/Availability
- Mid-life Overhaul
- Life Cycle Program – Component Rebuild
- Accident/Damage Repairs
- Vehicle Replacement

# Historic Streetcars Priorities

NO.	Project List	Cost Estimates
1	Safety enhancement for 9 Milan cars	\$ 1,183,431
2	Rehabilitation of Historic Streetcar No. 1 (CAR #1)	\$ 2,397,474
3	Rehabilitation of 16 PCCs 11 New Jersey PCCs (1070, 1071, 1072, 1073, 1074, 1075, 1076, 1077, 1078, 1079, 1080) 4 Double-ended PCCs (1006, 1008, 1009, 1011) 1 Single-ended PCCs (1040)	\$ 24,778,275
4	Major overhaul of 16 former SEPTA PCCs	\$ 18,216,366
5	Major rehabilitation of 5 vintage cars	\$ 8,557,844
6	Major overhaul of 11 Milan cars	\$ 16,472,647
7	Other Historic cars that need major overhaul (up to 15 cars)	\$ 30,259,239
<b>Total Program Cost</b>		<b>\$ 101,865,276</b>
<b>Total Funds Received</b>		<b>\$ 31,457,945</b>

# LRV Fleet Program Status

## **Reliability/Availability**

- Prioritized as funds are available

## • **Mid-Life Overhaul**

- Conceptual design specifications underway
- Preliminary cost estimated \$275M

## **Life Cycle – Component Rebuild**

- Rebuild or replace every 5 years per Original Equipment Manufacturer (OEM)
- Average annual cost estimate \$5 - \$10M

## • **Accident Damage/Repair Program**

- 8 major accident-damaged vehicles
- Cost estimate \$18M

# LRV Reliability & Availability

Prioritized Based on Funding

Description	Preliminary Cost	Purpose
Articulated harness modification	\$ 7,000,000	Improve train circuit reliability
PSC2 cable replacement	\$ 2,000,000	Improve ATCS reliability
Coupler rebuild	\$ 3,000,000	Improve vehicle trainline
Compressor replacement	\$ 3,000,000	Improve air system reliability
Doors and step reconditioning	\$ 15,000,000	Improve doors & steps reliability
Truck Rebuild-Phase I: up to 35 LRVs	\$ 15,000,000	Improve truck reliability

# LRV Midlife Overhaul Program

## Scope

- Conceptual design outlined for total overhaul
- Midlife overhaul work plan to be developed
- Consulting services needed: Master Plan, a two-year effort

## Schedule

- Five to seven-year program
- Start of program with vehicles eight to 14 years

## Cost

- Estimated program funding needed - \$275M

# LRV Accident / Damage Repairs

## Scope

- Minor damaged vehicles: Repair in-house with procured parts
- Medium damaged vehicles: 1428, 1451, 1499, 1502
- Major damaged vehicles: 1429, 1435, 1500, 1541

## Schedule

- Prioritized as funding becomes available
- Work in progress for minor damaged vehicles

## Cost estimate: \$18M

- \$2.6M from Proposition K funds
- Proposed as Stimulus Package project

# Bus Availability/Reliability

On-going Engine replacement program - \$5M

## Bus Replacement Program

<b>Vehicle Type</b>	<b>Vehicle Age</b>	<b>No. of Vehicles</b>	<b>Estimated Cost</b>	<b>Timeline</b>
<b>60 ft New Flyer Trolley</b>	<b>16</b>	<b>60</b>	<b>\$84M</b>	<b>2-5 years</b>
<b>40-ft Gillig Motor</b>	<b>16</b>	<b>45</b>	<b>\$32M</b>	<b>2-5 years</b>

# Fleet Improvement Programs – Funding Plan

<b>Revenue Fleet</b>	<b>Estimated Cost</b>	<b>Funded</b>	<b>Funds Needed</b>
<b>Historic Streetcar Fleet Rehabilitation Programs</b>	<b>\$ 102,000,000</b>	<b>\$ 31,000,000</b>	<b>\$ 71,000,000</b>
<b>LRV Fleet</b>	<b>\$ 45,000,000</b>	<b>\$ 18,000,000</b>	<b>\$ 27,000,000</b>
<b>Reliability / Availability</b>	<b>\$ 275,000,000</b>		<b>\$ 275,000,000</b>
<b>Rehabilitation Mid-life overhaul</b>	<b>\$ 18,000,000</b>		<b>\$ 18,000,000</b>
<b>Accident/damage repairs</b>			
<b>Cable Cars Rehabilitation Program (10 yrs)</b>	<b>\$ 12,000,000</b>		<b>\$ 12,000,000</b>
<b>Motor Coach Fleet Rehabilitation Programs</b>	<b>\$ 20,000,000</b>	<b>\$ 5,000,000</b>	<b>\$ 20,000,000</b>
<b>Motor coach component life-cycle</b>	<b>\$ 75,000,000</b>		<b>\$ 70,000,000</b>
<b>Neoplan mid-life overhaul</b>			
<b>Bus Fleet Replacement Programs</b>	<b>\$ 84,000,000</b>		<b>\$ 84,000,000</b>
<b>60 of 60-ft New Flyer trolley fleet</b>	<b>\$ 32,000,000</b>		<b>\$ 32,000,000</b>
<b>45 of 40-ft Gillig motor coach fleet</b>			