

AUGUST 6

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# Metro Bus Fleet Management Plan

## Table of Contents

<b>Introduction</b> .....	1
<b>1.0 Bus System Overview</b> .....	3
1.1 Metro Service Sectors.....	3
1.2 Routes and Service Area.....	3
1.3 System Performance .....	4
1.4 Contract Service.....	7
1.5 Pasadena Metro Gold Line.....	8
1.6 Consent Decree .....	9
1.7 Metro Rapid .....	10
1.8 Metro Fare Restructuring.....	11
1.9 Future Transportation Corridors.....	12
<b>2.0 Bus System – Future Changes</b> .....	13
2.1 Metro Connections.....	13
2.2 Latest Consent Decree Ruling / Fleet Plan Requirements .....	14
2.3 Metro Rapid .....	16
2.4 Future Service Improvements.....	17
<b>3.0 Bus Fleet Overview</b> .....	23
3.1 Current Bus Fleet .....	23
3.2 Service Coverage .....	25
<b>4.0 Bus Fleet – Future Changes</b> .....	27
4.1 Procuring High Capacity and Zero Emission Vehicles .....	27
4.2 Changing Bus Replacement and Retirement Standards.....	28
4.3 Expanding Fleet Seating Capacity.....	29
<b>5.0 Support Facilities Overview</b> .....	31
5.1 Overview of Existing Facilities .....	31
5.2 Other Facilities.....	33
5.3 Division Capacity.....	34
5.4 On-Going Operating Division Improvements .....	36
5.5 Other Facilities Needs.....	36
<b>6.0 Support Facilities – Future Needs</b> .....	39
6.1 Facility Capacity .....	39
6.2 The Geographic Distribution Of Division Capacity .....	40
6.3 Division Capabilities.....	41
6.4 Site Specific Facility Plans .....	42
6.5 CNG Fueling Capabilities.....	42

## Table of Contents (Continued)

<b>7.0 Maintenance</b> .....	45
7.1 Responsibility .....	45
7.2 Goals and Objectives .....	45
7.3 Revenue Service Vehicle Maintenance Plan .....	46
7.4 Other Major Programs .....	47
<b>8.0 Quality Assurance</b> .....	49
8.1 Responsibility .....	49
8.2 Maintenance Monitoring.....	50
<b>9.0 Findings and Conclusion</b> .....	53
<b>Appendix</b> .....	55

## INTRODUCTION

The Los Angeles Metro has the third largest bus fleet in the United States and operates more CNG buses than any other operator in the world. Over the last several years, it has made tremendous improvements to the Metro Bus system. An accelerated bus replacement plan has reduced the average age of the active fleet from about 9.5 years to less than six years and the reliability of service increased by over 100 percent. Improvements in service quality and availability are resulting in increased ridership. During the current Fiscal Year, over 356 million passengers are expected to board the Metro Bus system.

The Metro Bus Fleet Management Plan for fiscal years 2004 – 2013 explains how Metro will acquire, maintain and operate its bus fleet. This Fleet Plan has three primary purposes: 1) to describe and evaluate existing bus operations and maintenance practices, 2) to provide a framework for vehicle and facility planning, and 3) to describe how new transit projects will impact the bus operation.

This plan is an update to the Fleet Plan dated February 27, 2003. It is viewed as a living document. Metro is in a state of transition and is in the process of evaluating alternative strategies for meeting future demand. A key strategy incorporated in this plan is the deployment of high-capacity vehicles. As plans for these vehicles become more defined, there will need to adjust the service assumptions. Metro will provide progress reports on the Fleet Plan as new information becomes available and Plan elements will be updated as required.



## **1.0 BUS SYSTEM OVERVIEW**

### **1.1 METRO SERVICE SECTORS**

Currently, Metro's countywide bus operations is divided into five transit service sectors (See Appendix 1 for Metro Service Sector Map):

- Gateway Cities Sector
- San Fernando Valley Sector
- San Gabriel Valley Sector
- South Bay Sector
- Westside Central Sector

Each sector operates as a semi-independent unit of Metro with their own budget. They have capabilities similar to a municipal operator, with a full range of support staff including service planning and scheduling, community outreach, administration, security, and other support personnel. Each sector is assigned a fleet of approximately 400 to 600 buses. They are responsible for intercommunity and community based bus services in their areas, and core services that operate predominantly within their area. Sector Governance Councils determine policy for the planning and implementation of service in their area. Sector General Managers implement the decisions of the Governance Council and are responsible for day-to-day operations.

From time to time the bus line responsibilities will be modified as individual bus lines are reassigned among divisions and other service changes take place. Appendix 2 provides a list of bus lines assigned to each sector.

### **1.2 ROUTES AND SERVICE AREA**

Metro directly operates or contracts 186 bus routes within a service area of 1,433 square miles. The service level varies for weekdays, Saturdays and Sundays, as well as by time of day. Several routes operate 24-hour service, seven days a week. Most routes operate service based on the level of passenger demand. However, some Metro routes are operated on the basis of policy frequencies (generally a maximum of 60 minutes) to provide geographic coverage throughout the urbanized portions of Los Angeles County. Exhibit 1.1 summarizes Metro route categories:

**EXHIBIT 1.1  
METRO SERVICE DESCRIPTION  
(AS OF FEBRUARY 1, 2004)**

<b>LINE NUMBER CATEGORY</b>	<b>SERVICE DESCRIPTION</b>	<b>NUMBER OF ROUTES</b>
<b>1-99</b>	Local routes serving Downtown Los Angeles	44
<b>100-199</b>	East-West local routes not serving Downtown Los Angeles	37
<b>200-299</b>	North-South local routes not serving Downtown Los Angeles	43
<b>300-399</b>	Limited-stop services	21
<b>400-499</b>	Express routes serving Downtown Los Angeles	16
<b>500-599</b>	Express routes not serving Downtown Los Angeles	2
<b>600-699</b>	Shuttles and Special Services	16
<b>700-799</b>	Metro Rapid	7
	<b>TOTAL ROUTES</b>	<b>186</b>

*Source: Report 4-24 Directly Operated Service Effective 2-1-04 and Contract Services Department Effective 12-21-03.*

**1.3 SYSTEM PERFORMANCE**

Between 1996 and 2002, the number of peak buses in service (directly operated and contracted bus service) has increased from 1,794 to 2,067 or by 15.3 percent. During this same period, number of annual service hours operated by the bus system has increased from 6.2 to 7.2 million and annual system ridership grew from 336 million riders to 378 million. See Exhibit 1.2 below.

**EXHIBIT 1.2  
METRO DIRECTLY OPERATED AND  
CONTRACTED BUS SERVICE**

<b>FISCAL YEAR ENDING</b>	<b>PEAK FLEET</b>	<b>ANNUAL RIDERSHIP</b>	<b>ANNUAL SERVICE HOURS</b>
1996	1,794	336,853,544	6,252,352
1997	1,754	351,289,226	6,292,124
1998	1,898	367,913,375	6,429,164
1999	1,926	359,571,659	6,624,892
2000	2,017	359,001,513	6,942,309
*2001	2,026	336,308,899	6,538,236
2002	2,067	378,039,587	7,203,571
**2003	n/a	n/a	n/a

*Source: NTD Transit Profiles 1996 – 2002 (ID Number:9154)*

*Webpage: <http://www.ntdprogram.com/NTD/Profiles.nsf/Profiles?OpenView>*

*Notes: \*Five-week work stoppage occurred in FY01 and*

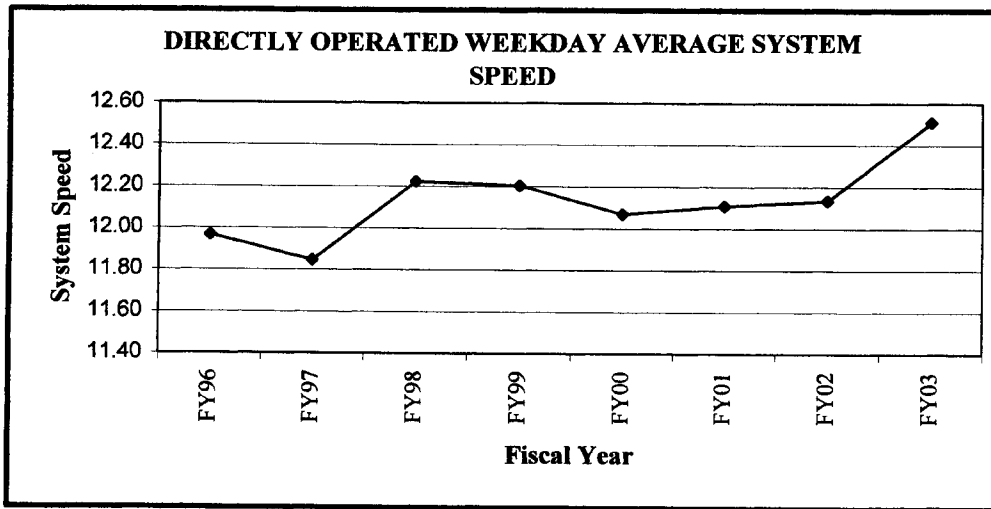
*\*\*2003 finalized data not available at time of printing.*



Over the last several years, Metro has made a major investments in improving its bus system. Service improvements were focused on four areas: Service reliability, system capacity, service availability, and on-time performance. There has been considerable progress in each of these areas.

Metro's system speed has increased by 4.5 percent since 1996. In June 2000, Metro began implementing the Metro Rapid program. As more Metro Rapids are implemented, as well as two proposed Metro Rapidways (Wilshire Rapidways and the San Fernando Orange Line), overall system speeds will continue to increase. See Exhibit 1.3 below:

**EXHIBIT 1.3**



*Source: Metro June 4-24 Reports from June 1996 through June 2003*

On September 28, 1998 the Metro Board of Directors approved an accelerated bus procurement plan that calls for the purchase of 2,095 buses by the end of fiscal year 2004. As a result of this plan, the age of the average vehicle in the Metro fleet has dropped from 9.5 to less than 6 years. This has been a key factor in improved bus service reliability. As shown in Exhibit 1.4 on next page, the average miles between chargeable road calls have increased from 4,784 miles in FY 1999 to 6,883 miles in FY 2003.

Metro measures service reliability by dividing the total number of hub miles by the total number of chargeable road calls. A chargeable road is any mechanical or equipment failure of a bus in revenue service that necessitates removing the bus from service until repairs are made or equipment restored to allow for normal revenue service operations. Total road calls would include both chargeable and non-chargeable road calls. Non-chargeable road calls are those instances in which preventative maintenance has no control over such as a sick passenger, vandalism, dirty bus, accidents, fareboxes, wheelchair lifts, heating, ventilation and air conditioning (HVAC) systems, and other problems not included as a major mechanical systems failure, etc. See Appendix 3 for detailed information.

**EXHIBIT 1.4  
AVERAGE MILES BETWEEN CHARGEABLE ROAD CALLS**

<b>FISCAL YEARS</b>	<b>HUB MILES</b>	<b>NO. OF CHARGEABLE ROAD CALLS</b>	<b>MEAN MILES BETWEEN MECHANICAL FAILURE</b>
FY99	89,236,300	18,654	4,784
FY00	94,579,400	16,934	5,585
FY01	72,722,600	16,401	4,434
FY02	97,957,900	16,900	5,796
FY03	97,582,600	14,178	6,883

*Source: Metro Operations Monthly Indicator Reports  
-FY01 data incomplete (data not available for February and March)  
-Five-week work stoppage occurred in FY01 & FY03*

Since 1996 the average number of standees on the most crowded bus lines has been reduced from 19 to about 8. System wide, passenger loads are now below the agency's 1.20-load factor standard over 97 percent of the time.

Over 14 new bus lines have been implemented since 1998 to improve access to schools, medical centers and work sites. In addition, Metro is in the process of implementing a new countywide bus program known as Metro Rapid. To date, Metro has implemented seven Metro Rapids on Ventura Blvd., Whittier/Wilshire Blvds., South Broadway, Vermont Ave., Florence Ave., Van Nuys Blvd., and Crenshaw Blvd. Approximately 21 more corridors are scheduled to receive this service by FY 2008. Section 2.4 and Appendix 4 of this report provides additional information on this program.

On-time performance is currently the key area targeted for improvement. Trips departing a time point 30 seconds or more prior to the scheduled time are early. Similarly, trips departing over 5 minutes after the scheduled time are considered late. Currently, approximately 64 percent of bus trips monitored are operating on time. Approximately 15 percent are operating early and 21 percent are late. Remedies for improving on time performance include: implementation of transit priority measures, increasing field supervision, and adjusting schedules. See Exhibit 1.5 below.

**EXHIBIT 1.5  
ON-TIME PERFORMANCE MEASURES**

	<b>% Early</b>	<b>% On-Time</b>	<b>% Late</b>
<b>ALL DAYS</b>	15.1	64.1	20.8
<b>Weekday</b>	14.8	64.6	20.8
<b>Saturday</b>	13.9	61.2	24.9
<b>Sunday</b>	14.4	64.5	21.1

*Source: APC Data Collected June 29, 2003 through January 7, 2004.*

See Appendix 4 for route level performance statistics for such things as ridership, productivity, on-time performance, and weekday load factor compliance.

The data for "Weekday Load Factor Compliance @ 1.20" in Appendix 4 is obtained from an ongoing point check monitoring program. This data was collected during the 4<sup>th</sup> quarter of 2003. During that quarter, 83 Metro bus lines were checked with varying frequency. Metro's top 20 lines (highest ridership) and all Metro Rapid bus lines are checked at least 3 times monthly; all other lines are checked at least monthly. Each line's compliance percentage shown in the table is calculated as  $(\text{Monitored Time} - \text{Violation Time}) / \text{Monitored Time}$  where Violation Time is the total observed minutes when the 1.20 load ratio was exceeded for 20 minute or longer peak periods (60 minute or longer off-peak periods) and Monitored Time is the total observed minutes for all point checks conducted.

A typical point check would consist of 13 hours of monitoring (from 6am through 7pm) in each of two directions of travel yielding  $13 \times 2 \times 60 = 1,560$  monitored minutes. If, for example, there was one exceedance of the 1.20 load factor target lasting for 25 minutes, then the calculated compliance percentage would be  $(1560 - 25) / 1560$  or 98.40%.

#### **1.4 CONTRACT SERVICES**

Metro contracts with private operators for the operation of 21 of Metro's 186 bus routes. These contract routes and current service provider are listed in Exhibit 1.6 on next page.

On December 21, 2003, Contract lines experienced a service change. Line 625 and 626 were combined and now operate as Line 625 and Line 646 was cancelled. The City of Los Angeles Department of Transportation (LADOT) operates another three routes with partial funding from Metro. These lines are not included as part of the 21 contract lines. The three lines are as follows:

- Line 422 – USC/Downtown LA/Hollywood/Sherman Oaks/Warner Center/  
Thousand Oaks
- Line 601 – Pico Union/Echo Park
- Line 602 – El Sereno/City Terrace

**EXHIBIT 1.6  
CONTRACT SERVICE PROVIDERS AND ROUTES**

<u>Coach USA</u>	<u>Transportation Concepts, Inc. (TCI)</u>
<p>Line 96 (L.A.-Burbank-Sherman Oaks)            Line 167 (Plummer Street-Coldwater Canyon Avenue)            Line 214 (Broadway – Main Street Loop)</p>	<p>Line 218 (West Hollywood-Studio City via Laurel Canyon Boulevard)            Line 603 (Rampart-Hoover-Colorado Boulevard Shuttle)            Line 605 (Grande Vista Street-USC Hospital Shuttle)            Line 608 (Crenshaw Connection)            Line 625 (Aviation Metro Green Line Station Shuttle)</p>
<u>First Transit, Inc.</u>	<u>Operation Shuttle</u>
<p>Line 125 (Rosecrans Avenue)            Line 128 (Alondra Boulevard)            Line 130 (Artesia Boulevard)            Line 177 (La Canada Flintridge-Pasadena-Arcadia-Monrovia-Duarte)            Line 205 (Willowbrook-Harbor City-San Pedro)            Line 225 (Aviation Blvd.- Palos Verdes Peninsula)            Line 226 (Palos Verdes Drive West)            Line 232 (Pacific Coast Highway)            Line 254 (Willowbrook-Huntington Park-Lorena Street)            Line 256 (Eastern Avenue-Avenue 64-North Hill Avenue)*            Line 266 (Lakewood-Rosemead Boulevards)            Line 270 (Monrovia-El Monte-Norwalk)</p>	<p>Operation Shuttle is the “subcontractor” for Lines 177 and 256; the General Contractor is First Transit, Inc.</p> <p>Operation Shuttle is also the “subcontractor” for Line 605; the General Contractor is Transportation Concepts, Inc.</p>
<u>MV Transit</u>	
<p>Line 58 (Union Station – Alameda Street – Washington Boulevard Metro Blue Line Station)</p>	

*Source: Contract Services Department*

*Note: Please note, that although lines 177, 256, and 603 are subcontracted to Operation Shuttle, Inc., by two General Contractors, the General Contractors are accountable for Operation Shuttle's performance.*

**1.5 PASADENA METRO GOLD LINE**

The Pasadena Metro Gold Line was implemented July 26, 2003. It operates approximately 13.7 miles between Union Station in Downtown Los Angeles and Pasadena and serves 12 new stations in Chinatown, Lincoln Heights, Highland Park, South Pasadena and Pasadena. Currently, Pasadena Metro Gold Line operates a service frequency of 7.5 minutes during the peak periods and every 12-30 during the non-peak periods.

The bus/rail interface plan is summarized in Appendix 6. The plan improved station access, by rerouting approximately 13 current bus lines that provide local circulation in the area and four proposed new shuttle services. Two Metro bus lines that duplicated significant portions of the Gold Line were cancelled (Lines 401 and 483). The unduplicated portions of these lines were replaced by new shuttle services that connect with the Gold Line. Other minor restructuring was implemented to improve service coverage and to reduce service duplication in the area. Appendix 6 provides additional information on the impacted lines.

The Pasadena Gold Line Bus-Rail Interface Plan was cost neutral. Resources saved by the reduction of service duplication were reinvested into new bus service, such as new limited stop services, shuttle services, and improved service levels along heavily traveled corridors.

Bus ridership data, post Gold Line opening, is still being collected. A 35-day work stoppage beginning in September 2003 and Metro's fare restructuring effective January 1, 2004, has impacted data collection and ridership.

Load factor compliance, before and after, was determined by APC data. As shown in Exhibit 1.7 on next page, the overall effect on bus lines impacted by the Gold Line is that load factor compliance improved from 96 percent to 98 percent. The data suggest that restructuring impacts are still being overshadowed by the recent work stoppage and fare restructure. Metro will continue to monitor bus lines that interface with the Gold Line and implement other service changes to ensure a continued smooth transition.

## **1.6 CONSENT DECREE**

In October 1996, Metro entered into a court ordered agreement known as the Consent Decree to settle a Federal Civil Rights suit regarding improvements to the operation of Metro's bus system. The Consent Decree provides for Metro to: (1) reduce its load factor (i.e. the number of people who stand on the bus) to certain targets, (2) expand bus service improvements, (3) implement a pilot project to facilitate access to county-wide job, education and health centers, (4) not increase cash fares for two years and pass fares for three years beginning December 1, 1996, after which Metro may raise fares subject to certain conditions of the Consent Decree, and (5) introduce a weekly pass and an off-peak discount fare on selected lines. Metro is also obligated to create a joint working group with representatives from the plaintiff's class and Metro to implement the Consent Decree. Section 2.2 of the report provides additional information on the status of this agreement.

**EXHIBIT 1.7  
LOAD FACTOR COMPLIANCE**

<b>May-03</b>		<b>Jan-04</b>	
<b>Line</b>	<b>Load Factor Compliance</b>	<b>Line</b>	<b>Load Factor Compliance</b>
28	97%	28	99%
70	100%	70	100%
76	100%	76	98%
78	96%	78	100%
81	93%	81	98%
175	100%	175	94%
180	94%	180	96%
206	86%	206	97%
251	95%	251	99%
252	100%	252	98%
260	92%	260	100%
266	100%	266	100%
268	97%	268	94%
484	93%	484	100%
487	98%	487	100%
489	100%	489	n/a
490	100%	490	100%
620	78%	620	100%
<b>Compliance</b>	<b>96%</b>		<b>98%</b>

*Source: Service Planning Department (point Check Reports 2003)  
Note: Load factor compliance was not determined for Lines 170, 176, 188, 201, 250, 255, 256, 259, 264, 267, 401, 471, 483, 485, and 489 because these lines are currently not monitored as part of Metro's Consent Decree.*

**1.7 METRO RAPID**

The two Metro Rapid demonstration lines, Line 720 (Whittier/Wilshire Corridor - 26 miles) and Line 750 (Ventura Blvd. Corridor – 16 miles), which began operations in June 2000, has proven successful with the implementation of key attributes, including unique vehicle and station “branding”, transit signal priority, special stations with “next trip” displays and information kiosks, and “rail-like” operating characteristics by making fewer stops than regular buses and run more frequently. Currently, Metro has implemented a total of seven Metro Rapids (See Section 2.3 for more detailed information). All Metro Rapid buses are state-of-the-art, low-floor, compressed natural gas buses with a distinctive red and white color scheme for easy identification.

The Metro Rapid Demonstration Program resulted in passenger travel times reduced by approximately 25 percent and a nearly 40 percent increase in ridership, with one-third of the increase new to public transit. Based on this success, the Board has asked the staff to

develop a Metro Rapid Five-Year Implementation Plan. On December 15, 2002, two more Metro Rapid lines were implemented along South Broadway and Vermont Avenue. On February 2, 2001, Metro implemented another Metro Rapid line along Crenshaw Blvd. See Section 2 Exhibit 2.1 for future planned Metro Rapids. Of the 13 key attributes associated with the Curitiba system, used in Brazil, the first seven were fully operational at start-up. The other six attributes are intended for implementation during Phase II. See Exhibit 1.8 below:

**EXHIBIT 1.8  
CURITIBA KEY ATTRIBUTES**

CURITIBA KEY ATTRIBUTES	PHASE I DEMONSTRATION	PHASE II EXPANDED SYSTEM
1. Simple Route Layout	Yes	Yes
2. Frequent Headways	Yes	Yes
3. Less Frequent Stops	Yes	Yes
4. Level Boarding and Alighting	Yes	Yes
5. Color Coded Buses and Stations	Yes	Yes
6. Station Stops	Yes	Yes
7. Signal Prioritization	Yes	Yes
8. Exclusive Bus Lanes	No	Yes
9. Higher-Capacity Buses	No	Yes
10. Multiple-Door Boarding and Alighting	No	Yes
11. Fare Prepayment	No	Yes
12. Feeder Network	No	Yes
13. Coordinated Land Use Planning	No	Yes

**1.8 METRO FARE RESTRUCTURING**

On January 1, 2004, Metro Bus and Metro Rail fares were changed for the first time in years. The cash fare was lowered by 10 cents to \$1.25 and a new day pass was introduced which replaced transfers for a cost of \$3.00. Seniors/Disabled/Medicare and student prices remained the same and the price of a day pass for that category is \$1.50. This new day pass is good for unlimited local travel all day. A new regional pass is expected in the near future. The price of tokens, regular monthly, semi-monthly, and weekly passes all increased. Metro-to-Metro transfers have been discontinued, however a Metro-to-Muni transfer can still be purchased (\$0.25 regular and \$0.10 for seniors/disabled/Medicaid). Exhibit 1.9 on next page displays fare changes:

**EXHIBIT 1.9**  
**DESCRIPTION OF METRO FARE RESTRUCTURE**  
**EFFECTIVE JANUARY 1, 2004**

	<b>Former Fare</b>	<b>New Fare</b>
Base Fare	\$1.35	\$1.25
New Day Pass	--	\$3.00
Tokens (10)	\$9.00	\$11.00
Weekly Pass	\$11.00	\$14.00
Semi-Monthly Pass	\$21.00	\$27.00
Monthly Pass	\$42.00	\$52.00

*Source: Marketing Department*

In the latter part of 2003 there was a work stoppage. Both the work stoppage and the restructured fares have contributed to a temporary decline in ridership of about 3 to 4 percent in the first two months of 2004. Overall revenue impacts are still being assessed, however it appears that monthly pass sales have declined and cash payments have increased. Metro expects ridership to rebound to its original projections by the close of FY 2005.

**1.9 FUTURE TRANSPORTATION CORRIDORS**

During 2000, the Metro Board approved the initiation of work on Draft Environmental Impact Statement/Reports for three transit corridors: Eastside, Mid-City/Westside and the Orange Line (Rapidway) in the San Fernando Valley. Additional information is provided in Section 2.5 of this report.



## **2.0 BUS SYSTEM - FUTURE CHANGES**

Metro's vision for future bus service is outlined in the Long Range Transportation Plan. Metro adopted the Long Range Transportation Plan (LRTP) in April 2001. The agency is currently working under the constrained scenario. The LRTP covers the period from 2000 to 2025. The LRTP proposes four objectives to meet this transportation challenge:

- 1) Manage the existing system.
- 2) Maximize system efficiency.
- 3) Increase system capacity.
- 4) Manage demand.

This vision calls for a balanced and fully integrated regional bus system. It also calls for Metro bus service that is clean, safe, comfortable, convenient, reliable, and customer focused. Key strategies proposed to achieve this vision include service reallocation based on demand, service delivery diversification, introduction of high-capacity vehicles into service, increased operating speed, improved system access and regional service coordination. A major system realign project, referred to as Metro Connection, is being planned as a means of implementing these strategies.

### **2.1 METRO CONNECTIONS**

The latest comprehensive restructuring of the Metro Bus system was implemented in the 1980's with the introduction of grid network service. Since then a series of incremental service changes have been implemented. While these efforts have resulted in service improvements, they have not fully addressed the significant changes in the region's service needs. In the last 20 years, there have been significant growth in the County's population and employment numbers, and travel patterns have changed. In addition, the region now has a successful 73-mile commuter rail system, known as the Metrolink, an urban rail system has been developed and the other transit providers in the regions have expanded service. Based on these factors, along with funding realities, there is a growing need to evaluate and develop a long-term strategy on how to best provide regional bus service.

The intention of this bus service restructuring effort is to move the region's predominantly grid system to more of multi-centered network, which would better reflect the region's dispersed travel patterns. The service delivery concept will focus on a network of majority activity centers, as focal points of the system.

A four-phased bus service restructuring effort was initiated in the fall of 2003 to develop a long-term strategy on how to best provide bus service throughout the region. The restructuring efforts will consist of the following major activities:

- Phase 1 – Needs Assessment
- Phase 2 – Develop alternative Strategies

- Phase 3 – Detail Implementation Plan
- Phase 4 – Implement Service

The first phase of the service restructuring effort was completed in January 2004. This initial effort included identification of project goals and objectives, and extensive stakeholder outreach. The second phase was initiated in February 2004. Staff will return to the Board in the mid-2004 with a set of proposed alternative service strategies for review and comment.

## **2.2 LATEST CONSENT DECREE RULING / FLEET PLAN REQUIREMENTS**

On January 12, 2004 the Special Master issued a ruling on the Consent Decree. The ruling focused on achieving greater compliance with the 1.20 load factor. It requires Metro to procure and deploy 145 expansion buses and to add 290,000 hours of additional service by December 2004.

Metro is appealing this order. Metro's appeal is limited in that it focuses on the number of buses required to operate the additional service, but agrees to add the 290,000 hours of additional service. Metro estimates that the additional service might require 80 additional peak buses. The 145 buses called for in the order does not appear to take into account scheduling efficiencies, opportunities for a single bus trip to mitigate multiple instances of passenger overloads along the same route, or the fact that much of the loading occurs outside the rush hour period and will not impact the size of the peak fleet.

The order also requires Metro to submit a fleet plan to the Special Master by April 15, 2004. Specific information to be included in the plan includes:

- Determination of the fleet baseline as of January 1, 2004;
- A fleet status report summarizing changes to the fleet between 1996 and the present;
- A plan for deploying the additional expansion vehicles that will be used to operate the 290,000 annual hours of expanded service called for in the latest order;
- A procurement plan to purchase 381 40-foot bus equivalents (based on seating) between FY 03 and FY 07, and
- A five-year forecast showing proposed changes to the fleet.

The Consent Decree ruling refers to the fleet as of January 1, 2004 as the baseline fleet. As of January 1, 2004, Metro owned a total of 2,702 buses, with a fleet total of 111,116 seats. Of the 2,702 buses in the fleet, 2,357 are in the active fleet for directly operated service, 170 buses are inactive vehicles and 175 vehicles are assigned to contractors. As of January 1, 2004, 259 buses were over 12 years of age. Exhibit 3.1 provides a detailed summary of the baseline fleet. Appendices 9 and 10 provide a detailed summary of the baseline fleet by age and type of vehicles.

Exhibit 2.1 summarizes changes to Metro bus fleet between January 1, 1996 and the present. During this period, the Metro fleet total has increased from 2,424 to 2,702, or by

278 buses. Since 1996, the number of buses directly operated by Metro has increased from 2,042 to 2,357 or by 315 buses. The increase in directly operated service does not include the expansion of contracted services, which increased to 0 to 175 buses during this period.

**EXHIBIT 2.1  
SUMMARY OF FLEET CHANGES BETWEEN  
JANUARY 1, 1996 AND JANUARY 1, 2004**

Date	Metro Directly Operated			Inactive	Contractor Vehicles	Total Metro Owned Fleet
	In-Service	Spares	Total D.O.			
January 1, 1996	1701	341	2042	382	0	2424
January 1, 1997	1796	360	2156	232	46	2434
January 1, 1998	1741	349	2090	262	112	2464
January 1, 1999	1734	347	2081	440	130	2651
January 1, 2000	1874	375	2249	250	139	2638
January 1, 2001	1888	378	2266	254	128	2648
January 1, 2002	1925	385	2310	369	137	2816
January 1, 2003	1947	390	2337	402	151	2890
January 1, 2004	1964	393	2357	170	175	2702

*Source: VMS Reports between January 1, 1996 through January 1, 2004*

Metro has estimated that it will require 80 in service vehicles and 16 spares to operate the 290,000 annual hour increase over the January 1, 2004 baseline. Of these, 10 vehicles were added as part of the February 2004 Service Change Program and another 20 will be added in June 2004. The remaining 50 vehicles will be placed into service as part of the December 2004 Service Change.

Of the 96 vehicles required for the service expansion, 52 will be taken from the inactive fleet and 44 vehicles (40 foot bus equivalents) will come from the delivery of 45 foot NABI Composite buses that were originally intended to be replacement buses.

The latest ruling requested Metro to procure the equivalent of 381 40-foot buses between FY 2003 and FY 2007. Exhibit 2.2 on next page summarizes scheduled delivery dates by vehicle type. Metro is expected to procure 420 buses, which includes 100 45-foot buses and 200 articulated buses. Exhibit 2.3, on next page, shows that these vehicles will provide seating capacity equivalent to 563 40-foot buses.

**EXHIBIT 2.2  
BUS PROCUREMENT SCHEDULE**

	FY03	FY04	FY05	FY06	FY07
NABI 370 Base Order	4	16			
NABI - 100 45' Buses		12	88		
NABI - Articulated Buses			30	170	
NABI - Articulated Buses, Option 1					100
NABI - Articulated Buses, Option 2					
<b>Total buses Procured:</b>	<b>4</b>	<b>28</b>	<b>118</b>	<b>170</b>	<b>100</b>
<b>Bus Procurements (40' Equivalents)</b>	<b>4</b>	<b>30</b>	<b>144</b>	<b>242</b>	<b>143</b>

**EXHIBIT 2.3  
CONVERTING FOR 40 FOOT EQUIVALENTS**

<b>Bus/Conversion Factor Based on Seating</b>	<b>40' Equiv.</b>
(20- 40' NABI) x 1 =	20
(100 - 45' NABI) x 46/40 =	115
(300 - 60' NABI ARTICS) x 57/40 =	428
<b>GRAND TOTAL</b>	<b>563</b>

A ten-year fleet forecast and procurement schedule is presented in Appendix 11.

**2.3 METRO RAPID**

A detailed phasing plan was presented to the Metro Board in September 2002 and approved. The Phase II expansion program, designed to expand the Metro Rapid network, has been initiated with the following Metro Rapids:

- Line 745 South Broadway
- Line 754 Vermont
- Line 711 Florence
- Line 761 Van Nuys
- Line 710 Crenshaw-Rossmore

Currently 21 more Metro Rapids are planned for implementation by FY 2008. Metro Rapid candidates are grouped into phases II-A, II-B, II-C, II-D, and II-E (see Exhibit 2.4 on next page). The phase groupings were based on:

- Phase II-A: Expand the network by introducing key connections
- Phase II-B: Introduce Metro Rapid on some of the region's heaviest corridors while continuing development of the network
- Phases IIC-II-E: Continue network development while focusing on major corridors.

**EXHIBIT 2.4  
PROPOSED METRO RAPID BUS  
PHASE II – CANDIDATE CORRIDORS**

Demonstration	Phase II A	Phase II B	Phase II C	Phase II D	Phase II E
Wilshire-Whittier	South Broadway	Hawthorne	Western	Central	West Olympic
Ventura	Vermont	Hollywood-Fairfax-Pasadena	Santa Monica	San Fernando-Lankershim	Garvey-Chavez
	Florence	Long Beach Blvd.	*Lincoln	*Pico	Manchester
	Van Nuys	Beverly	Reseda	Atlantic	San Fernando (south)
	Crenshaw-Rossmore	Sepulveda (north)			*Sepulveda (south)
	Soto				*Torrance-Long Beach
	Vernon-La Cienega				

Source: Transit Planning Department – Metro’s Five-Year Implementation Plan (Revised July 17, 2003)

Note: \* - May be operated by municipal operators

The Phase II Metro Rapid program calls for expansion of the service area throughout Los Angeles County. Four Metro Rapids are potential candidates for operation by municipal operators:

- Lincoln - Santa Monica Municipal Bus Lines (FY 2006)
- Pico - Santa Monica Municipal Bus Lines (FY 2007)
- Sepulveda (south) - Culver City Municipal Bus Lines (FY 2008)
- Torrance/ Long Beach – Torrance (FY 2008)

The Plan calls for the Municipal Operators using the same attributes, operating protocols, and branding to ensure a consistent “product” for the customer regardless of operator.

**2.4 FUTURE SERVICE IMPROVEMENTS**

Future service development opportunities are based on Metro’s 10-Year Service Forecast as summarized in Exhibit 2.5 on next page. Over the next year, Metro will update this plan and may make adjustments to both the service assumptions and vehicle procurements as needed. Metro will provide the FTA with updates as new information becomes available.

**EXHIBIT 2.5  
10-YEAR SERVICE FORECAST**

<b>Operating Statistics</b>	<b>FY04</b>	<b>FY05</b>	<b>FY06</b>	<b>FY07</b>	<b>FY08</b>	<b>FY09</b>	<b>FY10</b>	<b>FY11</b>	<b>FY12</b>	<b>FY13</b>
Annual Boardings (Million)	356.3	365.8	375.5	383.3	391.4	399.6	408.0	416.6	425.4	434.3
Annual Revenue Hours (Million)	7.33	7.56	7.75	7.81	7.82	7.99	8.04	7.89	7.98	7.85
Directly Operated Peak Vehicles	2,041	2,091	2,099	2,109	2,120	2,133	2,146	2,170	2,184	2,161
Total Seats In-Service During Peak	81,568	84,372	87,208	89,036	90,887	92,818	94,766	96,722	98,782	100,862

Source: Service Development Department.

Future service changes will focus on improving the speed and capacity of the bus system and working with the other bus operators in the county to develop a more integrated system. Many of the improvements will occur through service restructuring, reallocating resources from poorly performing or duplicative services, introduction of high capacity buses, and by implementing other operational efficiencies. Key service changes are displayed in Exhibit 2.6 below:

**EXHIBIT 2.6  
DESCRIPTION OF MAJOR SERVICE CHANGES**

<b>FY04</b>	<b>FY05</b>	<b>FY06</b>	<b>FY07</b>	<b>FY08</b>	<b>FY09</b>	<b>FY10</b>	<b>FY11 through FY13</b>
3 Metro Rapids (D): - Crenshaw-Rossmore - Soto - Vernon-La Cienega  45-foot bus deployment  Capacity Increase (30 peak buses)	SFV E/W Rapidway "Orange Line" (+18)  5 Metro Rapids (D): - Hawthorne - Hollywood/Fairfax/Pasadena - Long Beach - Beverly - Sepulveda (North)  Final Planned 45-foot Bus Deployment  Artic. Deployment  Capacity Increase (30 peak buses)  Metro Connections	4 Metro Rapids (D): - Western - Santa Monica - Lincoln - Reseda  Artic. Deployment  Metro Connections	4 Metro Rapids (D): - Central - San Fernando/Lankershim - Pico - Atlantic  Artic. Deployment  Metro Connections	6 Metro Rapids (D): - West Olympic - Garvey-Chavez - Manchester - San Fernando (south) - Sepulveda (south) - Torrance/Long Beach  Artic. Deployment	Eastside Gold Line Rail Extension and Bus Interface Enhancements (+32 40-foot buses)  Artic. Deployment	Final Planned Artic. Deployment  High-capacity buses to replace 40-foot buses	High-capacity buses to replace 40-foot buses  Exposition Light Rail and Bus Interface Enhancement (FY 2013)

Source: Service Development Department

**Metro Rapid Expansion** - Between 2003 and 2008 the Metro Rapid Network will be expanded from 7 to 28 lines. During this same period, municipal operators may implement 4 of these Metro Rapids (see Section 2.5 for details). This will result in over 400 miles of Metro Rapid, high capacity bus service that will serve 34 cities and 11 unincorporated LA County communities.

The Metro Rapid program is not expected to impact service hours. Resources for span and frequency improvements will occur through savings achieved by increasing the operating speed of the service. To date, these services have achieved increases in operating speed of 25 to 30 percent.

**San Fernando Valley Rapidway Orange Line (FY 2005)** - The San Fernando Valley Rapidway Orange Line project is an East/West 14-mile landscaped exclusive busway with 13 stations located on the Metro right-of-way between North Hollywood Metro Red Line Station and Warner Center in Woodland Hills. Metro plans to implement this project in FY 2005. In addition to the busway project, the Metro right-of-way will be improved with a parallel bicycle/pedestrian path. The new Rapidway service will initially operate with approximately 18 high-capacity vehicles. Existing bus service will also be enhanced to operate as a feeder system for the busway. These enhancements will occur through service restructuring and service reallocations.

**East Side Gold Line Extension (FY 2009)** - The Pasadena Metro Gold Line was completed and implemented on July 26, 2003. There are plans for an Eastside extension that will form a single operating line extending from East Los Angeles into the San Gabriel Valley by 2009. This project will consist of a six-mile; nine station light rail transit system, which will be an extension of the Pasadena Gold Line. It will travel from Union Station in Downtown Los Angeles, through Boyle Heights to its terminus at Whittier and Atlantic Blvds. Upon opening, the east side extension will initially operate service frequencies of 12 minutes during the peak periods and midday.

Metro will implement a bus rail interface plan to improve access to the East Side Gold Line Extension. The plan, which was developed as part of the Los Angeles Eastside Corridor Final EIR SEIS/SEIR, calls for increases in feeder bus service and increased service frequencies to existing Metro routes that serve LRT stations. Exhibit 2.7, on next page, shows the increase in service frequency as well as the addition of two routes (31A and 258A) expressly recommended to support the LRT Build Alternative. Increased service is proposed for Metro bus services in the Eastside Corridor as well as increased service for routes operated by Monterey Park and Los Angeles County.

The rail interface plan for the Eastside will require an increase of approximately 40 peak period buses. Of these buses, the Metro will directly operate 32. Additional resources for the rail interface plans may be made available through service reallocation. Details of the plan are still being worked out and projected route level impacts are not available at this time. Typically, rail interface plans are finalized as part of the Metro Service Change process. The final service change planning for this project will occur in FY 2008.

**EXHIBIT 2.7**

FREQUENCY OF WEEKDAY BUS TRANSIT SERVICE (IN MINUTES)						
Operator	Route	Destinations	Existing		LRT Build	
			Peak	Off-Peak	Peak	Off-Peak
MTA	18	Wilshire-Whittier	10	15	6	10
	30/31	Mid City - East Los Angeles	4-5	7.5	3.5	5
	31A	East Los Angeles - 1st/Lorena	-	-	10	15
	65	Downtown Los Angeles - CSULA	15-25	30	10	15
	66	Wilshire Center - Montebello	3-7	8	5.5	12
	68	West LA Transit Ctr - Montebello Towne Center	8-12	12	8	10.5
	250	LAC + USC - Boyle Heights	40	40	15	20
	251	Cypress Park - Watts	12	24	10	20
	252	El Sereno - Lynwood	12	24	10	20
	253	LAC + USC - Boyle Heights	40	40	15	20
	254	LAC + USC - Willowbrook	30-60	55	10	20
	255	Montecito Heights - East Los Angeles	45	50	10	20
	256	Altadena - East Los Angeles	35	50	30	50
	258	Alhambra - South Gate	45	60	30	30
	258A	Olympic - Floral	-	-	15	20
	259	El Sereno - Shouth Gate	45	60	30	30
	260	Altadena - Compton	12-15	15	5.5	20
	530	Panorama City - East Los Angeles	-	-	15	30
	605	LAC + USC - Boyle Heights	15	30	10	12
	620	LAC + USC - Boyle Heights	0-12	12	10	12
	720	Santa Monica - Montebello	8	10	6	10
L.A. County	Gold	East Los Angeles	60	60	10	15
	Green	East Los Angeles	60	60	10	15
	Orange	East Los Angeles - CSULA	60	60	10	15
Monterey Park	1	Community Circulator	40	40	20	30
	2	Community Circulator	40	40	20	30
	5	Community Circulator	50	50	20	30
Montebello	10	East LA College - Whittier	8-15	10	8	12
	40	Whittier - Downtown LA	10-30	12	10	20
	341(2)(3)	Downtown LA - Montebello Express Routes	30-60	-	30-60	-
LADOT	Dash A	Little Tokyo - Convention Center	5	5	5	5
	Dash D	South Park	5	5	5	5

Source: Los Angeles Eastside Corridor Final SEIS/SEIR

**Mid-City/Exposition Light Rail Transit Project (FY 2013) - The Mid-City/Exposition Light Rail Transit Project is the newest proposed extension of the 75-station Metro Rail**



system. Current plans call for a 9.6-mile line extending along the Metro-owned Exposition right-of-way from the existing Metro Rail station at 7th/Metro Center in downtown Los Angeles to Venice/Washington in Culver City, with an initial segment constructed at least to Vermont Avenue adjacent to Exposition Park. The Mid-City/Exposition Light Rail Transit Project will include seven new stations plus upgrades to three existing stations, providing a total of ten stations for the length of the initial segment of the route to Culver City. The alignment will primarily be at-grade. The Metro Board's vision and intent is eventually to complete the light rail line to Santa Monica. The revenue operation date for this project is November 2012.

**Deployment of High-Capacity Vehicles** - In an effort to improve service capacity, Metro is in the process of procuring both 45-foot and 60-foot articulated buses. Between FY04 and FY05 Metro will procure and deploy one hundred 45-foot Compo buses. Plans for procuring and deploying up to 600 articulated buses between FY 2005 and FY 2010 are being developed. The first 200 articulated buses are fully funded and will arrive in FY 2005 and FY 2006. There are two more purchase options that can be exercised. Each option consists of 200 articulated buses. Currently these options are not funded. These vehicles will be deployed on Rapidways, Rapid Bus, and high ridership local lines. Exhibit 4.1 displays the current proposed bus procurements from FY 2004 through FY 2013.



### 3.0 BUS FLEET OVERVIEW

#### 3.1 CURRENT BUS FLEET

Metro owned 2,702 buses as of January 1, 2004. The basic distribution of these buses is as follows:

**EXHIBIT 3.1  
METRO'S BASELINE FLEET  
(AS OF January 1, 2004)**

<b><u>Metro Directly Operated</u></b>	
<b><u>Active</u></b>	
<i><u>In-Service</u></i>	
Owned	1,964
Leased	0
<i>Sub-Total</i>	<b>1,964</b>
<i><u>Spare</u></i>	
Owned	393
Leased	0
<i>Sub-Total</i>	<b>393</b>
<b>Active Total:</b>	<b>2,357</b>
<b><u>Inactive</u></b>	
Special Assignment	86
Pending Evaluation / Sale Pending	59
Make Ready	25
<b>Inactive Total:</b>	<b>170</b>
<b><u>Contractor Vehicles</u></b>	
Owned	171
Leased	4
<b>Contract Total:</b>	<b>175</b>
<b>Metro Total Owned Fleet</b>	<b>2,702</b>

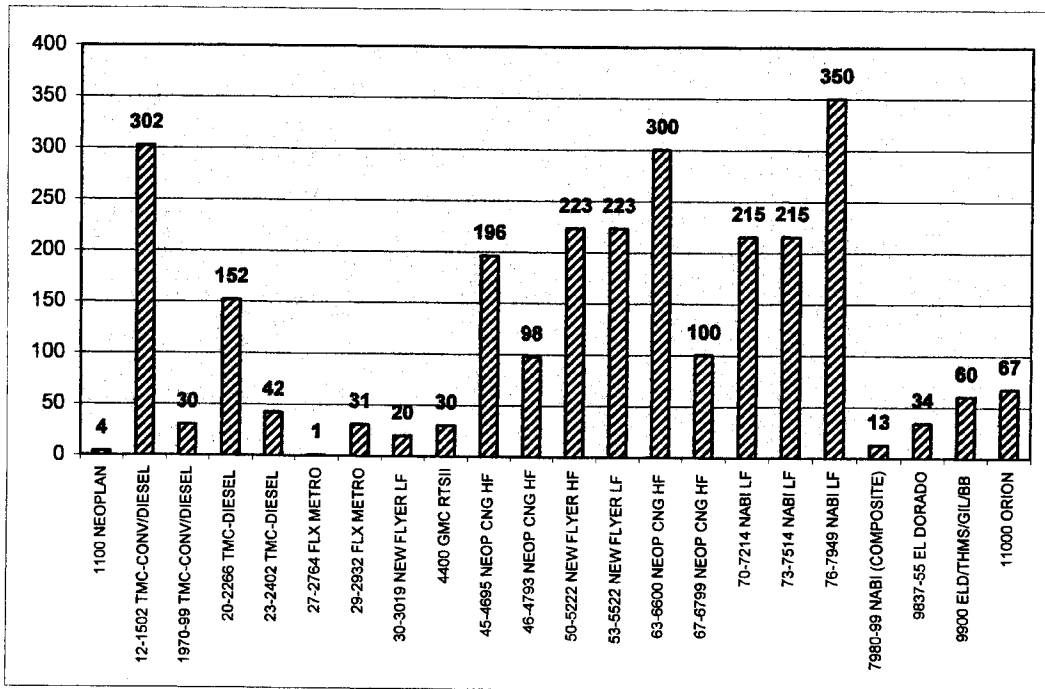
*Source: VMS Report Effective 1-1-04*

*Note: VMS shows Metro total owned fleet to be 2,706. Four (4) of these buses were sold, but still remained on the property as of 1-1-04.*

Included in the contract services buses are four buses leased to the City of Los Angeles Department of Transportation to operate Consent Decree related bus service on Line 422, which is contracted out under an MOU with the Metro paying the full cost. Contractors provide additional spare vehicles to augment Metro's fleet.

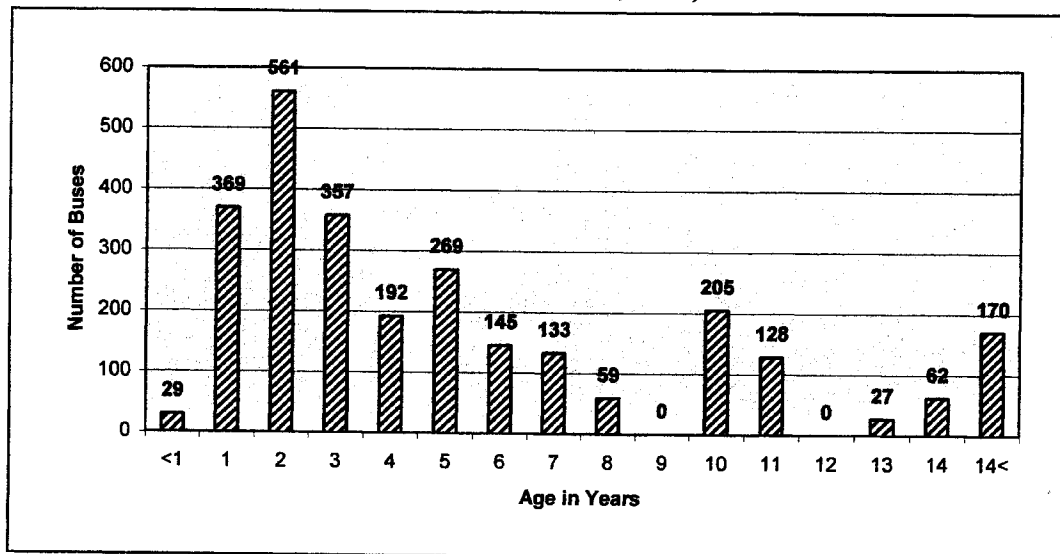
Metro directly operated bus fleet by type and age is shown in Exhibits 3.2 and 3.3 respectively on next page (see Appendix 9 and 10 for more details).

**EXHIBIT 3.2  
METRO DIRECTLY OPERATED BUS FLEET BY TYPE  
(AS OF JANUARY 1, 2004)**



Source: VMS Report Effective 1-1-04

**EXHIBIT 3.3  
METRO DIRECTLY OPERATED BUS FLEET BY AGE  
(AS OF JANUARY 1, 2004)**



Source: VMS Report Effective 1-1-04

The inactive category includes buses, which have been in major accidents and are being evaluated for possible repair, buses pending sale or retirement, and new buses, which are being made ready for service.

Effective with this plan, Metro will change its retirement policy from a 12-year to a 13-year life cycle, as discussed in Section 4.1 of this plan. The number of buses exceeding 13 years of age is 170 as of January 1, 2004. The average age of Metro's bus fleet is 5.8 years as of January 1, 2004 as shown in Exhibit 3.4 below.

**EXHIBIT 3.4  
METRO BUS FLEET AGE  
(AS OF JANUARY 1, 2004)**

	Average Age of Directly Operated Fleet	Buses Over 13 Years Old
<b>On January 1, 2004</b>	<b>5.8 years</b>	<b>170</b>

*Source: VMS Report Effective 1-1-04*

**3.2 SERVICE COVERAGE**

Metro routes serve minority and non-minority areas. The service is distributed in an equitable manner across the Los Angeles population without regard to race or ethnicity. See Appendix 10 for distribution of buses by Service Sector.



## **4.0 BUS FLEET – FUTURE CHANGES**

Key planned changes to fleet include:

- Procuring High Capacity and Zero Emission Vehicles – Beginning in FY 2005 high capacity buses will be added to the fleet. By FY 2013 approximately half the vehicles in the fleet will be high capacity vehicles. Of these, about 600 will be CNG articulated buses. Detailed specifications for the remainder of the high capacity vehicles are yet to be determined. Additionally, regional air quality regulations will require that 15 percent of the buses purchased after FY 2010 meet zero emission standards. Although the procurement plan responds to this initiative, detailed programming cannot be completed, because this type of vehicle is not currently available in the market place.
- Changing Bus Replacement Standards – This plan calls for changing the current bus replacement standard from 12 years of service to 13 years and/or 500,000 miles of service. This recommendation is based on the relatively young age of the Metro fleet, current fleet performance, improving vehicle technology and financial considerations. This change will result in an increase in the average fleet age. Between FY 2005 and FY 2013, the average age of the fleet will be increase from about 5.7 years to 7.3 years.
- Expanding Fleet Seating Capacity– Metro developed a measure that would be sensitive to changes in the fleet mix and ensure we continue to meet federally mandated objectives for increasing seating capacity on the bus system. We used the ratio of annual boardings to daily peak seats (the maximum number of seats on the road) and determined the FY06 ratio of 4,306 boardings per a peak seat was the one to use because it represented the final adjustment of this court ordered mandate. This ratio is maintained throughout the life of this plan. The daily peak system fleet seating capacity will increase approximately 24 percent, while projected boardings will increase 22 percent between FY 2004 and FY 2013 (See Section 4.3 for more details).

### **4.1 PROCURING HIGH CAPACITY AND ZERO EMISSION VEHICLES**

In an effort to improve service capacity, Metro is in the process of procuring 45-foot and articulated buses. Current plans show Metro will procure and deploy one hundred 45-foot buses and 600 articulated buses between FY 2004 and FY 2011. Between FY 2011 and FY 2013 Metro will continue to procure and deploy some type of high-capacity bus. A portion of these procurements will be Zero Emission Buses. These figures are subject to change and are currently being used for planning purposes. Exhibit 4.1, on next page, displays Metro's current proposed bus procurement schedule. The delivery numbers and type of vehicles will be revised annually as service requirements change.

**EXHIBIT 4.1  
BUS PROCUREMENTS: FY04 – FY13**

Bus Procurement Schedule	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	Total
NABI 370 Base Order	16										16
NABI - 100 45' Buses	12	88									100
NABI - Articulated Buses		30	170								200
NABI - Articulated Buses, Option 1				100	100						200
NABI - Articulated Buses, Option 2						100	100				200
High-Capacity Bus								70	125	250	445
Zero Emission Buses								30	25	50	105
<b>Total Planned Procured:</b>	<b>28</b>	<b>118</b>	<b>170</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>150</b>	<b>300</b>	<b>1266</b>

*Note: Currently, funding for articulated buses option 1 & 2 are planned, but not funded. Metro will request funding for these buses in the next capital cycle.*

Metro is currently in the process of developing a high capacity vehicle deployment plan for all five sectors in order to increase system capacity and address bus lines with load factor problems. This plan will determine the line assignments of the high capacity vehicles. At this point, the Wilshire Metro Rapid/Rapidway and the San Fernando Valley Orange Line are among the top candidates to receive high-capacity vehicles initially.

**4.2 CHANGING BUS REPLACEMENT AND RETIREMENT STANDARDS**

Between 1998 and 2004, Metro purchased 2,095 new vehicles as part of an accelerated bus procurement plan to replace all vehicles over 12 years of age. The objective of the plan was to improve service reliability and reduce operating cost by lowering the fleet age. The implementation of the plan lowered the average age of the fleet from 9.7 to 5.8 years. During this same period, the mean miles between chargeable mechanical failures increased from about 4,800 miles to over 6,900 miles.

As shown in Exhibit 4.2, Metro now has one of youngest fleets of any major transit property in North America.

**EXHIBIT 4.2  
AVERAGE AGE OF COMPARABLE BUS FLEETS  
(2001 NATIONAL TRANSIT DATABASE)**

Transit Agency	Age (Years)	Peak Buses
Chicago	8.8	1,627
Houston	3.4	1,050
Los Angeles (Metro)	6.3	1,891
New York	5.7	3,887
New Jersey	9	1,838
Philadelphia	8.9	1,106
Washington D.C.	7.8	1,212



Of the 2,532 active vehicles in the Metro bus fleet to include contract services, only 118 are over 13 years old. Additionally, many of the buses that are now being procured have design features that should help extend the bus life.

Another operating feature of the Metro bus fleet that influences fleet retirement practices is the average miles traveled per bus. Generally, as vehicles accumulate over 500,000 miles they become less reliable and much more expensive to maintain. Metro's average operating speed is a little better than 12 miles per hour, compared to about 8 miles per hour for other major urban transit operators. The average vehicle in the fleet is logging over 40,000 miles a year.

This plan calls for two changes to the 12-year age standard used to develop bus retirement schedules. The first change is to increase the age based bus replacement standard from 12 to 13 years. This is based on several factors, including: the relative age of the fleet, current fleet performance, on-going improvements in vehicle technology, as well as financial considerations. The second change is to also use a mileage standard for identifying buses for retirement consideration. This standard would be set at 500,000 miles. In conjunction with this standard, there would be mileage reviews as part of each shake-up and periodic reassignment of vehicles to help equalize fleet mileage among vehicles of the same age.

The replacement standards are a guideline used to help identify those buses that are candidates for retirement. Final decisions on vehicle retirements will consider other factors such as: the relative maintenance cost and performance of the bus or bus series, grant requirements associated with major restoration projects, and the availability of replacement vehicles.

To monitor the average age of the fleet, the plan recommends using an average fleet age target of 7.5 years. The average age of the fleet age will vary over the life of the plan. It will go from 6.2 years in FY 2005 to 7.3 years in FY 2013, as shown in Exhibit 4.3.

### **4.3 EXPANDING FLEET SEATING CAPACITY**

To forecast required seating capacity needs on the bus system, Metro needed to develop a measure that would be sensitive to the change in fleet mix and ensure we continue to meet a federally mandated objective for increasing seating on the bus system..

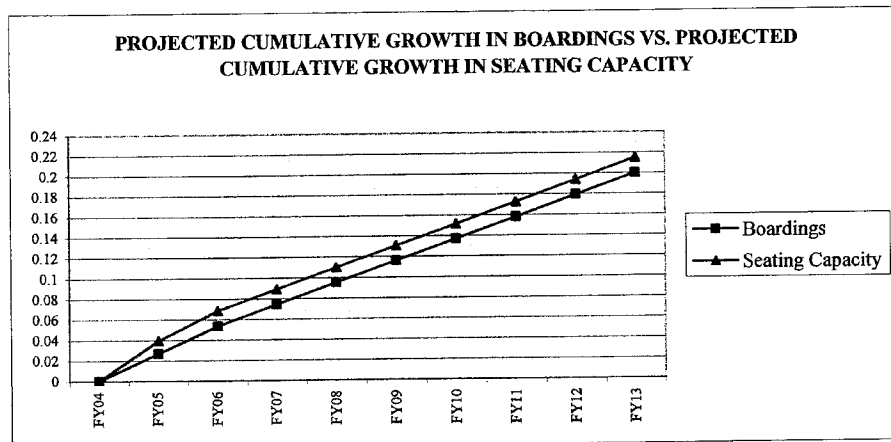
Metro used the ratio of annual boardings to daily peak seats (the maximum number of seats on the road), as determined by FY06 ratio, which represents the final adjustment of a court ordered mandate to add a significant number of buses. As shown on the next page in Exhibit 4.3, this ratio turned out to be 4,306 boarding per a daily peak seat. Metro's goal is to maintain this ratio over the life of the plan as its seat capacity target. Exhibit 4.4 on next page charts projected annual boardings versus growth in seating capacity.

**EXHIBIT 4.3  
DAILY PEAK SEAT TARGET**

Projected Increases	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13
<b>Annual Boardings</b>	355,329,140	365,812,052	375,494,105	383,379,481	391,430,450	399,650,490	408,043,150	416,612,056	425,360,909	434,293,489
<b>Daily Peak Seat Target</b>	<b>81,568</b>	<b>84,366</b>	<b>87,203</b>	<b>89,034</b>	<b>90,903</b>	<b>92,812</b>	<b>94,762</b>	<b>96,752</b>	<b>98,783</b>	<b>100,858</b>
<b>Annual Boarding to Daily Peak Seats</b>	4,368	4336	4306	4306	4306	4306	4306	4306	4306	4306

Source: Service Planning Department

**EXHIBIT 4.4**



Source: Service Planning Department

Exhibit 4.5 below shows the number of buses and fleet mix required to achieve the daily peak seat target for each fiscal year. The overall effect is a slight growth in directly operated vehicles and a significant growth in seating capacity due to the deployment of high capacity vehicles. Appendix 11 displays a detailed chart on Metro's bus service requirements and proposed procurement plan.

**EXHIBIT 4.5  
BUS REQUIREMENT**

Directly Operated Active Buses	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13
35-foot buses	18	18	18	18	18	18	18	18	18	18
40-foot buses	2023	1972	1832	1758	1686	1616	1545	1487	1376	1102
45-foot buses	0	83	83	83	83	83	83	83	83	83
Articulated buses	0	18	166	250	333	416	500	500	500	500
High Capacity Bus	0	0	0	0	0	0	0	83	208	456
<b>Total In-Service</b>	<b>2041</b>	<b>2091</b>	<b>2099</b>	<b>2109</b>	<b>2120</b>	<b>2133</b>	<b>2146</b>	<b>2171</b>	<b>2185</b>	<b>2161</b>
<b>Daily Peak Seat Target</b>	<b>81,568</b>	<b>84,366</b>	<b>87,203</b>	<b>89,034</b>	<b>90,903</b>	<b>92,812</b>	<b>94,762</b>	<b>96,752</b>	<b>98,783</b>	<b>100,858</b>
<b>Total Seats In-Service:</b>	<b>81,568</b>	<b>84,372</b>	<b>87,208</b>	<b>89,036</b>	<b>90,887</b>	<b>92,818</b>	<b>94,766</b>	<b>96,762</b>	<b>98,822</b>	<b>100,862</b>
<b>Average Fleet Age (13 Year Replacement Cycle):</b>	<b>6.2</b>	<b>6.7</b>	<b>6.3</b>	<b>6.5</b>	<b>6.7</b>	<b>6.9</b>	<b>7.2</b>	<b>7.7</b>	<b>7.9</b>	<b>7.3</b>

Source: Service Planning Department

## **5.0 SUPPORT FACILITIES OVERVIEW**

In March 2003, Metro completed a Bus Division Strategic Assessment Report and Long Range Facility Plan. There were two key findings of the study: 1) the bus facilities do not have sufficient capacity to meet existing fleet needs, and 2) the overall condition of the facilities is poor. A number of projects are being programmed through the Capital Improvement Plan to respond to specific findings of the facility assessment.

In general, there is insufficient bus parking and a number of divisions need facility upgrades. However, there are sufficient numbers of maintenance bus bays to meet system requirements.

### **5.1 OVERVIEW OF EXISTING FACILITIES**

Metro owns and operates 11 bus-operating divisions. Appendix 12 is a map showing the location of each division. Additional information for each facility is summarized in Exhibit 5.1 on the following page.

All divisions, except Division 6 in Venice are staffed 24 hours a day, seven days a week. Division 6 is closed on Saturdays, Sundays and major holidays. By July 2006, Division 6 will be relocated to West Los Angeles. This new location will provide approximately an additional 100 40-foot bus parking spaces. Upon relocation Division 6 will operate seven days a week to include holidays (Section 6.0 provides more details).

Each division has a transportation unit headed by a Transportation Manager and a maintenance unit headed by a Maintenance Manager. The Transportation Manager and the Maintenance Manager both report to their respective Service Sector General Manager.

Transportation management at the division coordinates operator staff and schedules to ensure that service assignments are met on a daily basis. It is responsible for driver training and instruction, accident investigation, and personnel management. Maintenance management at the division ensures that coaches are roadworthy and meet the specifications for service and performs routine maintenance on coaches, including preventive procedures, running repairs and minor overhauls.

**EXHIBIT 5.1  
METRO BUS OPERATING DIVISIONS - FACILITY PROFILES**

DIVISION	LOCATION	YEAR BUILT Transportation (T) Maintenance (M)	DESIGN CAPACITY (1)	COVERED BUS SERVICE BAYS (2)						BUS LIFTS			BUS FUEL CAPACITY		
				MAINT. BLDG.	STEAM CLEAN	TIRE SHOP	FUELING STATION	DYNO SHOP	PAINT SHOP	MAINT. BLDG.	STEAM CLEAN	TIRE SHOP	LIQUID FUEL (Gal)	CNG COMPRESSORS	
1	Central Los Angeles	1981(T) 1987(M)	170	16	1	2	3	0	0	0	12	1	0	150,000	3 @ 2,000scfm
2	Central Los Angeles	1987(T) 1930(M)	201	26	2	1	8	0	0	0	0	0	0	120,000	3 @ 2,400scfm
3	Cypress Park	1984(T) 1977(M)	212	18	2	1	8	1	0	0	12	0	0	120,000	3 @ 1,200scfm 1,300scfm 2 @
5	South Central Los Angeles	1979(T) 1984(M)	229	18	2	2	8	1	0	0	10	1	0	120,000	3 @ 2,000scfm
6	Venice	1930	51	10	1	1	2	0	0	0	0	0	0	20,000	0
7	West Hollywood	1977	234	20	2	2	8	1	0	0	12	0	0	120,000	3 @ 2,000scfm
8	Chatsworth	1982	238	22	2	2	8	1	1	1	16	1	2	120,000	3 @ 2,400scfm
9	El Monte	1975	294	16	2	1	8	1	0	0	2	0	0	140,000	3 @ 2,400scfm
10	Mission Road	1984	241	18	2	4	4	1	0	0	12	1	0	120,000	3 @ 1,100scfm 1,200scfm 1 @
15	Sun Valley	1982	266	22	2	2	8	1	1	1	16	1	2	120,000	3 @ 2,400scfm
18	Carson	1984	268	18	2	2	8	0	0	0	9	1	0	120,000	3 @ 1,100scfm 1,200scfm 1 @
<b>SYSTEM TOTAL:</b>				<b>204</b>	<b>20</b>	<b>20</b>	<b>73</b>	<b>7</b>	<b>2</b>	<b>2</b>	<b>101</b>	<b>6</b>	<b>4</b>		

Source:  
Bus Division Strategic Assessment Report  
Footnotes:  
(1) Based on 40' buses.  
(2) Defined as an area where a bus can be parked for minor repairs.

## **5.2 OTHER FACILITIES**

In addition to the maintenance divisions, Metro has other services at the following locations:

- **DIVISION 4** - Located in the City of Downey, this facility is currently equipped to provide non-revenue vehicle maintenance for Metro automobiles, trucks and vans. In addition, new vehicles are prepared for service at this facility. This can include the installation of radios, lights, customized racks, equipment and decals. This facility also houses the auto salvage storage area. Although the facility was formerly a bus maintenance facility, there are currently no fueling or vehicle servicing capabilities. In September 2002, the Gateway Cities Service Sector moved to Division 4. It is one of five separate geographical community-based transit service sectors headed by a General Manager and operated as a semi-independent unit of Metro with their own budget. They have a full range of support staff including: service planning and scheduling, community outreach, administration, security, and other support personnel.
- **LOCATION 14**- South Park Shops are located in South Central Los Angeles. This is a large industrial-use facility, which houses bulk storage for large or slow-moving parts and supplies, storage of salvage equipment and other materiel scheduled for disposal or sale, and flammable materiel storage. It also houses various facilities maintenance functions, such as carpentry and sign printing, and large maintenance equipment.
- **LOCATION 29** - The Cash Counting Facility is located at Division 2. Cash and tokens collected through bus and rail revenue operations are counted at this site.
- **LOCATION 30** - The Regional Rebuild Center (RRC) is located in the northeast portion of Downtown Los Angeles, one block from Metro headquarters building at Gateway Center. This central maintenance facility is recognized as one of the most advanced and efficient bus repair operations facilities of its kind in the world and contains the following functions:

Electronic fare box repair	Emissions testing
Alternate fuels testing	Body shop
Bus painting	Unit repair
Heavy maintenance bus support	Central Stores

The RRC also serves as the primary site for the Transportation and Maintenance Departments' Central Instruction function. All training for new operators, mechanics, and service attendants occurs at this facility, as well as refresher training classes for existing operators, mechanics, and service attendants.

- LOCATION 33 – San Gabriel Valley Service Sector Office is located adjacent to Division 9 in El Monte. It is one of five separate geographical community-based transit service sectors headed by a General Manager and operated as a semi-independent unit of Metro with their own budget. They have a full range of support staff including: service planning and scheduling, community outreach, administration, security, and other support personnel.
- LOCATION 34 - Vernon Yard is located south of Downtown Los Angeles in the City of Vernon. Personnel of the Rail Facilities Maintenance section primarily occupy this facility. Additionally, the fare box and rail ticket vending machine (TVM) maintenance section is located here. Training for Class A licenses for mechanics and bus familiarization for new service attendants are conducted here.
- LOCATION 35 – San Fernando Valley Sector Office is located 1.2 miles northwest of Division 8 in Chatsworth. It is one of five separate geographical community-based transit service sectors headed by a General Manager and operated as a semi-independent unit of Metro with their own budget. They have a full range of support staff including service planning and scheduling, community outreach, administration, security, and other support personnel.
- LOCATION 36 – South Bay Sector Office is located about 1 mile east of the City of Torrance at 680 Knox St., Los Angeles, CA 90248. It is one of five separate geographical community-based transit service sectors headed by a General Manager and operated as a semi-independent unit of Metro with their own budget. They have a full range of support staff including service planning and scheduling, community outreach, administration, security, and other support personnel.

### **5.3 DIVISION CAPACITY**

As part of this study, both facility bus storage capacity and maintenance capabilities were evaluated. The storage evaluation compared future fleet forecast to systemwide parking availability. In addition, maintenance capabilities were evaluated by determining the system wide ratio of bus maintenance bays to assigned buses. A ratio of 16 buses per a bay or less is considered sufficient maintenance capacity.

**EXHIBIT 5.2**  
**DIVISION CAPACITY (PARKING / MAINTENANCE)**  
(As of February 1, 2004)

DIVISION	LOCATION	DESIGN PARKING CAPACITY	ASSIGNED BUSES	PARKING CAPACITY OVER / (UNDER)	MAINT. BAYS	NO. OF BUSES PER MAINT. BAY
1	Central Los Angeles	170	181	11	16	11
2	Central Los Angeles	201	185	(16)	26	7
3	Cypress Park	212	200	(12)	18	11
5	South Central Los Angeles	229	259	30	18	14
6	Venice	51	78	27	10	8
7	West Hollywood	234	258	24	20	13
8	Chatsworth	238	165	(73)	22	8
9	El Monte	294	192	(102)	16	12
10	Mission Road	241	271	30	18	15
15	Sun Valley	266	251	(15)	22	11
18	Carson	268	284	16	18	16
<b>TOTAL</b>		<b>2,404</b>	<b>2,324</b>	<b>(80)</b>	<b>204</b>	<b>12</b>

*Source: Fleet Management and Support Services*

There is an immediate need for Metro to increase bus parking capacity system wide. As shown in Exhibit 5.2 above, six of the eleven bus divisions are operating over design capacity. There are service changes both planned and mandated that will increase future parking demand such as Consent Decree requirements, deploying articulated and 45-foot buses and service enhancements to existing bus lines.

Metro's divisions currently have sufficient maintenance bays to maintain assigned vehicles. For each year of the plan, the systemwide ratio of buses to maintenance figure remains below the 16:1 standard. However, Division 9 is the only division that would have a bus repair capacity problem. If it were operating at its designed parking capacity, there is a potential need for two additional maintaining bays. As discussed in Section 2.0, Metro will begin to expand its current fleet size as well as its fleet mix by introducing high capacity vehicles beginning in FY 2004. Not all maintenance bays have bus lifts, or lifts that are suitable for articulated buses, as noted in Exhibit 5.1. There are further discussions and solutions that address these issues in Section 6.0.

## **5.4 ON-GOING OPERATING DIVISION IMPROVEMENTS**

There are several projects in progress to improve CNG capabilities and division capacity as discussed below:

CNG Fueling Capabilities - The total CNG fueling capability increased from 1,340 CNG buses at seven operating divisions on January 1, 2001 to 2,231 CNG buses at ten operating divisions as of August 1, 2002. Metro now has CNG fueling capabilities at all its active bus divisions with the exception of Division 6. The 2,231 total CNG fueling capability available on August 1, 2002 exceeded the total CNG bus fleet of 1,851 buses. For more CNG fueling station information, see Section 6.2, CNG Facilities.

Division Capability / Capacity – With the introduction of high-capacity vehicles, especially articulated buses, division capabilities becomes an issue that must be re-evaluated along with parking capacity. The following major improvement projects have been approved and are in early stages of property acquisition, facility design, or construction:

- Division 10 is being expanded to accommodate 100 articulated buses in addition to its current design capacity for a total of 341 parking spaces. In addition, this expansion will increase the number of maintenance bays from 18 to 22. The facility expansion is scheduled to be complete in late FY 2007.
- Division 6 is being relocated to a new property in West Los Angeles, adding capacity for up to 100 additional buses for a total of 151 parking spaces. In addition, this relocation will increase the number of maintenance bays from 10 to 15. This project is scheduled to be complete in July 2006.
- Following a recent public hearing, the Board agreed to begin an eminent domain action to acquire a 2.3-acre parcel of land just to the south of Central City Division 1. Metro plans to expand Division 1, increasing the division's capacity from its current 183 to 283 buses to accommodate 100 Consent Decree buses and adding as many as 120 employee parking stalls by FY 2006. Once the property is purchased, the agency will ask the City of Los Angeles to close a portion of Industrial Street, which will be included in the bus yard.

## **5.5 OTHER FACILITIES NEEDS**

As part of the Bus Division Strategic Assessment, Facilities-Operations conducted individual on-site evaluations at each operating division. These facilities range from 20 to 100 years and many need improvements. Example of the general needs at the operating divisions follows below:



- Pit extensions and installation of three-post hoists.
- Bus washer and service island upgrades.
- Reconfigure yards layout and bus parking.
- Upgrade the Transportation and Maintenance administrative space.
- Expand employee parking.
- Site-specific assessments need to be conducted to determine the necessary improvements at each facility.

A Long Range Facility Plan has been developed to correct these deficiencies and improve Metro's operating divisions. Several improvements to correct the deficiencies listed above have been included in the FY 2004 to FY 2009 Capital Program: Funding is being identified to fund additional improvements.



## **6.0 SUPPORT FACILITIES – FUTURE NEEDS**

Continued ridership and proposed changes to the mix of the Metro bus fleet will place new demands on support facilities. Key facility issues include:

- System wide Parking Capacity
- The Geographic Distribution of Division Capacity
- Facility Capability for Supporting High Capacity Buses
- Revisiting Site Specific Plans
- CNG Capabilities

Each of these topics is discussed in the following sections of this chapter.

### **6.1 FACILITY CAPACITY**

As the agency begins to deploy high capacity buses the shortage of bus parking spaces will become more severe. Over the life of the plan systemwide demand for bus parking will increase by almost 30 percent or from 2500 40-foot bus equivalents to over 3,100 40-foot bus equivalents.

There are two efforts underway to deal with this growth in parking demand. The first is an on-going program to increase the capacity of existing facilities and the second is consider developing two new bus divisions in the downtown area, between FY 08 and FY 12. Division expansion will add about 300 additional parking spaces, while the construction of two new divisions will add over 450 additional bus parking spaces.

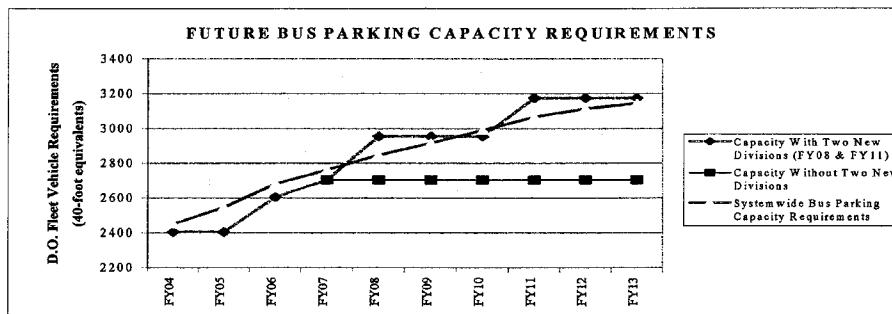
Expansion of Existing Bus Operating Divisions – The following expansion projects have been approved and are in early stages of property acquisition, facility design, or construction:

- Division 10 is being expanded to accommodate 100 articulated buses in addition to its current design capacity. The facility expansion is scheduled to be complete in late FY07. During the early phases of construction, parking will be expanded to allow greater utilization of the facility.
- Division 6 is being relocated to a new property in West Los Angeles, adding capacity for up to 100 additional buses, CNG fueling capability for 200 CNG buses, and an additional 5 maintenance bays. This project is scheduled to be complete in July 2006.
- Division 1 will be expanded to accommodate up to 100 additional buses via acquisition of adjacent property. Pending acquisition of the property in June 2004, the expanded facility is expected to be complete in FY06. The facility will temporarily operate up to 100 consent decree buses on the newly acquired property by January 2005.

- Metro staff is also in early stages of conceptual design for future facility expansion projects planned for Divisions 2, 3, 5, 9, and 18. These projects are not currently funded but will be required to support Metro's forecasted bus fleet through at least FY 2010. Metro Facilities-Operations is currently seeking funds for completion of these proposed facility expansions as described in the March 2003 Bus Division Strategic Assessment Report and Long Range Facilities Plan.

Open Two New Bus Operating Divisions – Exhibit 6.1 below compares future directly operated fleet vehicle requirements to proposed future division parking capacity. Metro will need to develop additional bus divisions in order to support the future fleet.

**EXHIBIT 6.1**



Source: Metro Service Planning Department and Facility-Operation Department

The construction of two new facilities in the downtown Los Angeles area is currently under consideration. The first division will need to come on line by FY 08 and support the equivalent of 250 buses. The facility would be designed to be able to accommodate a fleet of articulated buses. A second facility will need to come on line by FY 11 and will need to accommodate between 220 and 250 buses.

The estimated cost of a new division is \$60 million. Metro Facilities-Operations is currently seeking funds for acquisition of property and construction of these new bus-operating facilities. Property location activities are currently underway. As part of this study, a general assessment of the systemwide capacity was conducted. This assessment reviewed the systemwide ratio of buses to repair bays.

## **6.2 THE GEOGRAPHIC DISTRIBUTION OF DIVISION CAPACITY**

Available capacity is generally located in the San Fernando Valley and San Gabriel Valley Sectors, while most of the ridership growth is occurring in the Gateway, South Bay, and Westside Central Sectors. This is resulting in an inefficient assignment of bus lines to divisions and has increased the amount of non-productive mileage required to break buses into and out of service.

In Exhibit 6.1 the 40-foot equivalency factors used to evaluate system wide storage capacity are different than those used to determine seating capacity. For purposes of the parking evaluation, the following factors were used: a 60-foot articulated bus equates to 1.7 40-foot buses; high capacity and hybrid buses equate to 1.2 40-foot buses, and a 45-foot bus equates to 1.2 40-foot buses.

Exhibit 6.2 shows the change in ratio of non-revenue hours to total vehicle hour from 8.1 to 9.3 percent, or an increase of 1.2 percent. On a fully allocated cost basis, each ½ percent increase translates into an annual cost of approximately \$3.5 million. The key to controlling this cost is to develop additional facility capacity in the central portion of the service area.

**EXHIBIT 6.2  
EIGHT -YEAR TREND:  
DAILY NON-REVENUE HOURS TO TOTAL VEHICLE  
HOURS FOR METRO DIRECTLY OPERATED SERVICE**

<b>SERVICE CHANGE</b>	<b>NON-REV VEH HOURS</b>	<b>REVENUE VEH HOURS</b>	<b>TOTAL VEH HOURS</b>	<b>NON-REV HOURS TO TOTAL VEH HOURS</b>
6/30/1996	1,656.5	18,679.3	20,335.8	8.1%
12/15/1996	1,668.0	18,603.7	20,271.7	8.2%
6/29/1997	1,786.7	19,127.4	20,914.1	8.5%
12/14/1997	1,737.7	18,973.5	20,711.2	8.4%
6/28/1998	1,755.5	18,839.5	20,595.0	8.5%
12/27/1998	1,596.4	18,536.5	20,132.9	7.9%
6/6/1999	1,755.4	19,689.5	21,444.9	8.2%
12/5/1999	1,850.0	20,303.6	22,153.6	8.4%
6/25/2000	1,936.6	20,972.0	22,908.6	8.5%
12/17/2000	1,940.3	20,945.7	22,886.0	8.5%
6/3/2001	1,882.7	20,729.5	22,612.2	8.3%
12/30/2001	1,992.0	21,144.6	23,136.6	8.6%
6/30/2002	2,000.8	21,172.3	23,173.1	8.6%
12/15/2002	2,009.8	21,460.7	23,470.5	8.6%
6/29/2003	2,108.4	21,027.0	23,135.4	9.1%
2/1/2004	2,162.9	21,019.2	23,182.1	9.3%

*Source: 4-24 Report: June 1996 through February 2004*

**6.3 DIVISION CAPABILITIES**

As stated previously, Metro will begin to deploy articulated buses beginning in FY 2005. Not all of Metro bus divisions are capable of supporting articulated buses at this time. Some key features required to support articulated buses at a division are:

- Division reconfiguration to accommodate parking and turning movements
- Maintenance building modifications (drive through bays preferred)
- Extra bus lifts (ground hoists)
- Vacuum, fueling, and washing equipment retrofits
- Extension of maintenance pits where required

Divisions 1, 3, 5, 7, 8, 9, 10, 15, and 18 are capable of supporting articulated buses with modifications as noted in above bullets. In addition, when Division 6 is relocated to its new site near Jefferson Blvd. and National Blvd. in West Los Angeles in 2006, it will be designed to support articulated buses and will have CNG fueling capabilities. The configuration of Division 2 does not allow for maintenance and operation of articulated buses. A more detailed report of facility capability is currently underway. Exhibit 6.3 on next page summarizes the above information.

#### **6.4 SITE SPECIFIC FACILITY PLANS**

Over the next few years the individual site plans for each of the maintenance facilities will need to be reviewed. Additional facility upgrades may be required to accommodate high capacity vehicles and to allow for improvements in the workflow at the individual divisions.

#### **6.5 CNG FUELING CAPABILITIES**

Metro currently has CNG fueling capability to service 2,231 CNG buses at ten of their operating divisions. At present there are a total of 1,851 CNG buses in the fleet. By March 2003 Metro's CNG fueling capability will increase to 2,400 buses. As with parking capacity, Metro fully expects to accommodate the fueling needs of its entire fleet with the additions of 570 CNG 45-foot buses, 72 CNG-electric articulated buses, and 230 CNG articulated buses and the reduction of 1063 CNG 40-foot buses.

**EXHIBIT 6.3  
METRO BUS DIVISION ARTICULATED READINESS**

DIVISION	LOCATION	Metro SECTOR	ARTICULATED READINESS		COMMENTS
			CAPABLE	NON-CAPABLE	
1	Central Los Angeles	Gateway	X		May require division reconfiguration, building modifications, and impact maintenance productivity
2	Central Los Angeles	Gateway		X	Not ideal.
3	Cypress Park	San Gabriel Valley	X		May require division reconfiguration, building modifications, and impact maintenance productivity
5	South Central Los Angeles	South Bay	X		May require division reconfiguration, building modifications, and impact maintenance productivity
6	Venice	Westside Central		X	Will be relocated to a new site in West Los Angeles in 2006 and will be able to support articulated buses as well as CNG fueling capabilities.
7	West Hollywood	Westside Central	X		May require division reconfiguration, building modifications, and impact maintenance productivity
8	Chatsworth	San Fernando Valley	X		May require division reconfiguration, building modifications, and impact maintenance productivity
9	El Monte	San Gabriel Valley	X		May require division reconfiguration, building modifications, and impact maintenance productivity
10	Mission Road	Westside Central	X		May require division reconfiguration, building modifications, and impact maintenance productivity. Approved for expansion of 100 articulated bus parking spaces in addition to its current design capacity.
15	Sun Valley	San Fernando Valley	X		May require division reconfiguration, building modifications, and impact maintenance productivity
18	Carson	South Bay	X		May require division reconfiguration, building modifications, and impact maintenance productivity

*Source: Fleet Management and Support Services*





## **7.0 MAINTENANCE**

### **7.1 RESPONSIBILITY**

The Maintenance Department is responsible for the upkeep of nearly \$6 billion dollars in facilities, systems, and equipment used for transit service operated by Metro. Over the next five years, the Maintenance Department plans to address several key issues that will greatly impact the provision of Metro bus and rail service.

- The Operating Facility Master Plan developed by the Facilities Maintenance Department identified a need for approximately \$200 million for on-going maintenance and improvements between fiscal years 2001 and 2005. Many of these improvements have been included in the Metro Capital Improvement Plan (CIP).
- The arrival of 2,095 new CNG buses through the year 2004 to replace the existing fleet will require fueling and maintenance upgrades at all operating divisions and maintenance support facilities. The addition of such a large number of CNG buses will also require extensive training of staff to properly maintain the vehicles, facility support systems, and equipment.
- Maintenance staff is preparing for the expansion of the bus fleet to meet Consent Decree load factor targets.
- Maintenance staff is also preparing for the procurement and deployment of high-capacity buses (both articulated and 45-foot buses).
- New technologies will require updated training for maintenance personnel. These new technologies include the “Smart” Bus, voice enunciators to call stops, automated vehicle locator systems to track the location of buses, automatic passenger counters to monitor ridership, upgraded radio systems, Universal Fare Systems, Compo 45-foot buses, CNG-electric articulated buses, and CNG articulated buses.

### **7.2 GOALS AND OBJECTIVES**

Metro has set a number of specific goals for the maintenance organization. These goals include maintaining an acceptable level of vehicle life and serviceability, minimizing the amount of road failures, and minimizing the cost of the maintenance function through training and improved productivity. Each year, Metro staff prepare anticipated budgets and Management Action Plans (MAPs) which reflect, in a measurable way, staff’s commitment to performance objectives. The Metro Maintenance Department objectives are as follows:

1. To operate a safe, clean, convenient and efficient mass transportation system for the general public and visitors to the Los Angeles Metropolitan region.
2. To develop and maintain an integrated bus and rail system incorporating the strengths of other service providers into the fabric of the Metro system.
3. To improve the productivity of the transportation, maintenance and management sectors of Metro.
4. To protect and enhance the public's investment in the public transportation system.

In order to provide more specific guidance, the maintenance organization has included the following objectives in its MAPs:

1. Provide a minimum 100% on-time pullout rate for buses.
2. Increase the mean miles between all mechanical failures that cause a service delay to 7,500 miles (see Section 1.3 Exhibit C for average miles between road calls).
3. Maintain the fleet size in accordance with the Board-Adopted Fleet Mix Policy (see Section 4.1 for bus service requirements and procurements).
4. Ensure that all securement devices, doors, radios, and other disabled service items are in good working order at all times.
5. Operate and maintain Metro owned CNG facilities and meet the requirements of the CNG development program (see Sections 5.2 and 6.3 for more details).

### **7.3 REVENUE SERVICE VEHICLE MAINTENANCE PLAN**

The Maintenance Department is guided by a Revenue Service Vehicle Maintenance Plan, which was developed to preserve and maintain the agency's capital assets (rolling stock), ensure that all revenue and non-revenue vehicles are operable in a safe and effective condition, and establish reasonable standards and practices necessary to meet these objectives. The Revenue Service Vehicle Maintenance Plan was revised and updated in June 2003 and consists of the following major components.

- Maintenance Plan
- Bus assignment (Active) and Replacement
- Maintenance Department Organizational Structure
- Bus Procurement/Inspection Policy
- Maintenance Directives
- Preventive Maintenance Program (PMP) Schedule

- Personnel Qualification Standards (PQS)
- Technical Training Courses
- QA Inspection Program
- Bus Warranty Processing Procedures
- Injury and Illness Prevention (IIP) Program
- Personal and Protective Equipment (PPE)

The Maintenance Plan is reviewed annually and periodically updated to ensure adequate documentation of current maintenance practices and procedures. The Revenue Service Vehicle Maintenance Plan is contained in Appendix 13.

#### **7.4 OTHER MAJOR PROGRAMS**

*Universal Fare System (UFS)* - A major regional effort to integrate transit fares is underway. The program involves implementation of a new fare system, known as the Universal Fare System or UFS. A \$70 million contract for the design and implementation of this program was awarded during FY 2002. The project will involve the installation of new fare technology on the regional bus and rail system. This technology includes new fare boxes and ticket vending machines, as well as the use of smart cards. The UFS electronic technology will help to promote the development of new regional fare policies which may allow interagency transfers, day passes and other opportunities to improve passenger convenience and seamless travel on the county's public transportation system.

On September 1, 2002 Los Angeles County's first regional pass program began. It allows unlimited travel on the Metro Bus and Metro Rail systems, and on the Metro lines of 12 municipal bus operators. A regional consortium has been established to coordinate the implementation of the project. Key milestones are shown in Exhibit 7.1 below:

#### **EXHIBIT 7.1 METRO SERVICE DESCRIPTION**

<b>Milestone</b>	<b>Date</b>
Notice to proceed issued	March 02
Complete testing for Pasadena Gold Line	April 03
Complete installation of ticket vending machines for Pasadena Gold Line	June 03
Complete pilot testing for Metro bus and rail system	October 03
Fare boxes installation on Metro bus system completed	March 04
Sales office terminal installation completed	April 04
Complete test analysis and testing of equipment for Metro bus system	July 04
Complete test analysis and testing of equipment for Metro rail system	February 05

Advanced Transportation Management System (ATMS) - ATMS works much like a Local Area Network (LAN), only on a bus it is called a Vehicle Area Network (VAN). Different pieces of hardware are connected to the network via a voice and digital radio system. The ATMS system also has a Wireless LAN system for downloading operating statistics. ATMS systems include: Voice and Data Radio Systems, Automatic Vehicle Location, Automatic Voice Annunciation, Automatic Passenger Counters, and enhanced Video Surveillance Systems. These various systems work together on the VAN, using a master system controller, to provide communication and data for real-time use and for batch data processing at pull in time. The ATMS system also uses open architecture that should facilitate future system enhancements and upgrades.

ATMS system installation is nearly complete, with over 2000 of Metro's buses currently operating on the new radio system. Metro is also including new technology training as one of the contractor's requirements to provide for Metro staff in all new bus procurements.

By June 2004, ATMS will be installed on every bus in the fleet. ATMS is designed to improve operating efficiency and improve service quality. Operators and dispatchers will benefit from a vastly improved communication system. Additionally, ATMS should also provide detailed Operations performance information that should dramatically improve the quality, reliability and efficiency of Metro's bus operation.

## **8.0 QUALITY ASSURANCE**

### **8.1 RESPONSIBILITY**

Quality Assurance consists of Environmental Compliance, Quality Assurance Bus and Non-Revenue and Contract Administration. Major responsibilities are highlighted here and more detail is provided in each functional area as follows:

Environmental compliance and HAZMAT response ensures that Metro operations complies with federal, state and local environmental laws and oversees the accumulation and disposal of various liquid and solid wastes and waste streams. This section is responsible for hazardous material spill response, both liquid and solid, and for handling abandoned hazardous waste on Metro owned right-of-way. Also, this section approves all new cleaning chemicals for use at operating facilities.

Quality Assurance Bus includes vehicle inspections such as simulated CHP inspections, specialized fleet inspections, and investigations on vehicles involved in accidents and fires. Other activities include: quality of the Regional Rebuild Center, (RRC) built components, overseeing the drivers Pull Notice program to ensure compliance; system testing, evaluating and qualifying new parts and components for buses, and overseeing the oil analysis program and monitoring contractor performance.

Quality Assurance is also engaged with the management of the Non-Revenue Section, which is responsible for the maintenance of approximately 1,500 pieces of rolling stock and related support equipment. Non-Revenue operates from nine locations throughout the greater Los Angeles area and is managed by two Equipment Maintenance Supervisors.

Other responsibilities the Non-Revenue Section, include:

- Receive, inspect and distribute replacement and expansion vehicles for all departments in Metro.
- Develop equipment specifications for all replacement vehicles and equipment.
- Develop Capitol Improvement Program plan for non-revenue equipment.
- Manage the fleet tracking system.
- Manage the sale of all non-revenue equipment.

The Quality Assurance Department manages numerous contracts for goods and services and provides contract project management to achieve the goals of Metro while complying with related requirements set forth by federal, state and local agencies. Of 20 contracts managed, the two largest are the tire lease contract, currently with an annual budget of

approximately \$4,000,000 and the liquid waste disposal contract amounting to \$600,000 per year.

## **8.2 MAINTENANCE MONITORING**

The Quality Assurance Section (QA) of the Operations Department is directly responsible for participating in 11 annual motor carrier (bus) inspections performed by the California Highway Patrol (CHP) Motor Carrier Unit. Metro regulated (commercial) equipment is inspected according to the California Code of Regulations, Title 13, relative to equipment and records compliance. Quality Assurance works closely with the CHP in a technical/liaison role to ensure the inspection needs are met and that division procedures are explained.

During an inspection, Quality Assurance staff presents related information and documents as follows:

- Presents all operator and mechanic driver log books
- Secures work cards, inspection sheets and maintenance reports
- Presents planned maintenance forms
- Shows work activity by vehicle on the Vehicle Maintenance System
- Presents vehicle inspection history

Quality Assurance also performs ongoing simulated CHP Motor Carrier (bus) Inspections on regulated equipment at the operating divisions, Stores Department and Facility Maintenance Department. Metro has developed criteria more stringent than the CHP when doing our own quarterly inspections. Each facility is inspected for vehicle condition, maintenance records and driver log books. At the conclusion of each inspection, the facility manager is briefed as to the overall condition of the fleet based on a random sample of the inspected buses.

The vehicles are inspected according to criteria outlined in the California Code of Regulations (Title 13), North America Out-of-Service Criteria and the California Vehicle Code. Quality Assurance staff regularly instructs division personnel in the proper way to repair and inspect vehicles according to state and federal regulations. As such, these inspections and the related training ensure that Metro equipment and records are in optimal condition and that they comply with the requirements of the law.

Quality Assurance Rail provides the technical support and oversight necessary in acquiring the parts and services required to ensure Metro's rail operation is in compliance with federal, state and local mandates in addition to internal policies and procedures, as well as providing safe and reliable service to the public. The section is also involved in rail car accident investigations.

Stops and Zones/Metro Clean consists of two sub-functional areas. Both units are entrusted with Metro's inventory of 18,000 bus stops and zones throughout Los Angeles, and portions of Orange, Ventura and San Bernardino Counties. The Stops and Zones Unit expertise consists of planning, installing, complaint resolution and maintenance of all 18,000 Metro bus stops-bus zones, and related fixtures and hardware. The Metro Clean Section focuses on the cleaning of buses, bus stops and zones, and inactive rail right-of-way through use of community service workers from two sources; first by contracting with the Los Angeles County Probation Department, and second by daily in-house operation of community service worker crews.





## 9.0 FINDINGS AND CONCLUSION

Based on this evaluation, the Metro bus fleet size is sufficient to meet current ridership. In recent years, there have been significant improvements in fleet performance. Many of these improvements are attributed to the accelerated bus procurement plan, which resulted in the procurement of over 1,800 new buses between 1998 and 2004. Metro has one of the youngest bus fleets of major transit operators in the United States. With the implementation of the accelerated bus procurement plan, the average age of the fleet has gone from 9.7 to 5.8 years and service reliability, as measured in the mean miles between mechanical failures, and has improved by 44 percent.

There have been recent policy decisions regarding the deployment of high capacity and zero emission vehicles. The change in fleet mix, from predominately 40-foot CNG buses to a mixed fleet with a large number of high capacity and zero emission vehicles will impact future vehicle replacement costs. By FY 2013 almost half of Metro's Bus fleet will be comprised of high capacity vehicles. The vehicle procurement schedule outlined in this report supports these initiatives and will be updated as new information becomes available. Based on this procurement schedule, total fleet seating capacity will increase by approximately 24 percent by FY 2013, due largely to the deployment of high capacity vehicles. This increase is based on forecasted ridership growth and preserving current passenger load conditions.

The plan also recommends changes to vehicle retirement standards. The plan recommends going from a 12-year age standard to a 13-year age and /or a 500,000-mile standard. This recommendation considered a number of factors, including: fleet age and performance, on-going improvements in bus technology, and financial considerations. To ensure that there is not an overall decline in fleet condition, the plan also calls for using an average fleet age target of not to exceed 7.5 years for managing the bus procurement and retirement process.

Metro Bus facilities are operating over capacity and need improvements in order to be capable of supporting high capacity buses. Six of Metro's 11 bus-operating facilities are operating over capacity. Improvements and increases in yard capacity are required to operate the existing fleet, accommodate future ridership and fleet growth, and to control deadhead costs. The plan identifies the need for two additional bus facilities in the central county area. One facility is needed immediately, while the other will need to be on line by FY 2011.

The operating divisions are 20 to 100 years old and many will need to be modified or upgraded. This has been addressed in the Metro Bus Division Strategic Assessment Report, Long Range Facility Plan. Several projects are being programmed through the Capital Improvement Plan to respond to the findings of the facility assessment.



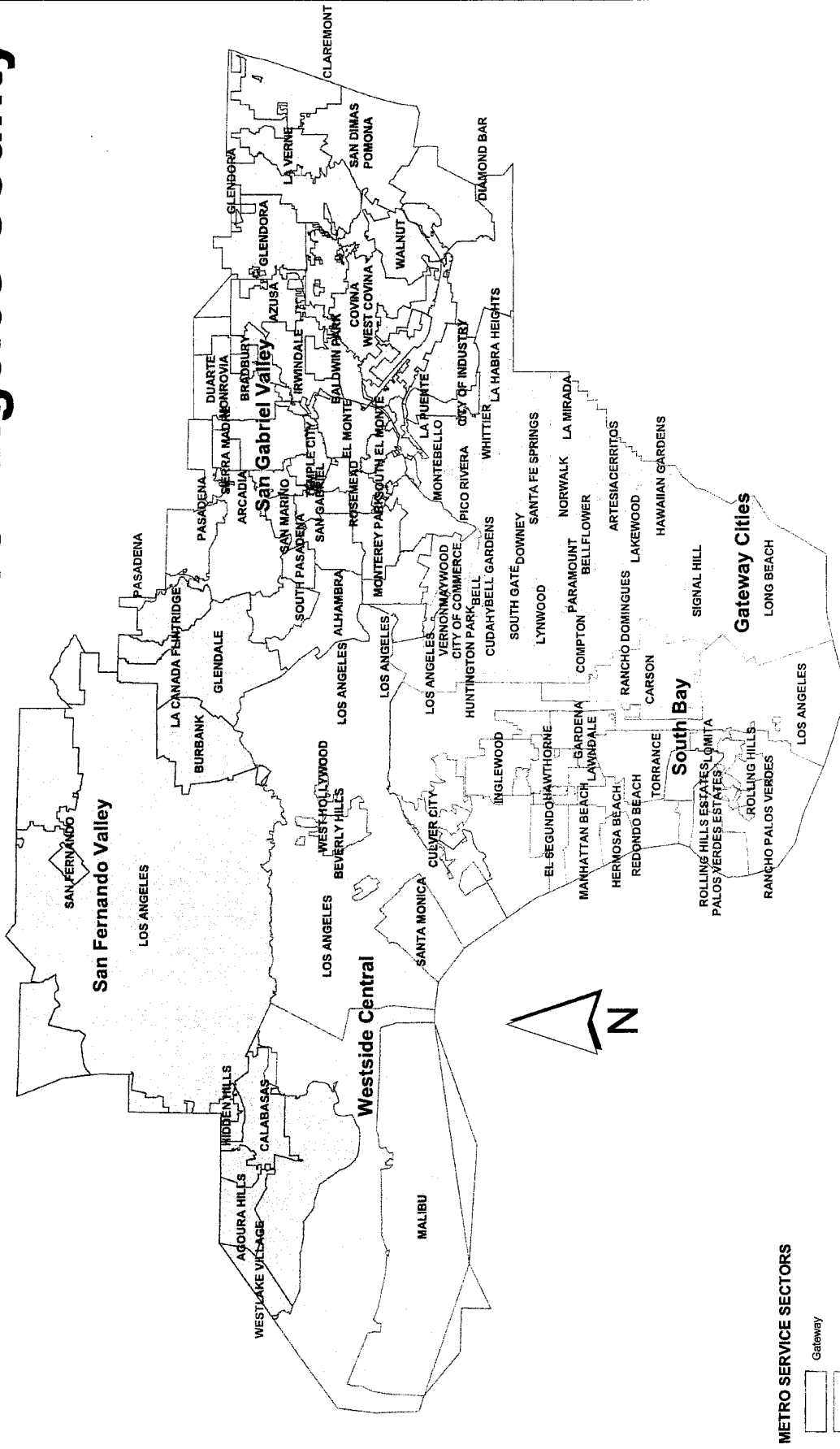
## **Bus Fleet Management Plan Appendices**

- Appendix 1:** Metro Service Sector Areas
- Appendix 2:** Line Assignment Responsibility by Service Sectors
- Appendix 3:** Road Calls by Division
- Appendix 4:** Metro Bus System Data Effective 2004
- Appendix 5:** Metro Rapid Expansion Program
- Appendix 6:** June 2003 Bus/Rail Interface Planned Changes
- Appendix 7:** Comparison of Bus Requirements
- Appendix 8:** Metro Scheduled Service Operating Cost Factors Report No. 4-24
- Appendix 9:** Distribution of Buses and Number of Buses by Age and Bus Series as of January 1, 2004
- Appendix 10:** Distribution of buses and number of buses by age and by division and Service Sector as of January 1, 2004
- Appendix 11:** 10-Year service forecast and vehicle requirements between FY 2004 and FY 2013
- Appendix 12:** Metro Operating Divisions and Other Major Facilities
- Appendix 13:** Metro Revenue Service Vehicle Maintenance Plan



# APPENDIX 1

# Metro Service Sector Los Angeles County



**METRO SERVICE SECTORS**

- Gateway
- San Fernando Valley
- San Gabriel Valley
- South Bay
- Westside Central



**Appendix 1  
Incorporated Cities Located In Each Metro Service Sector**

	<b>Gateway</b>	<b>San Fernando Valley</b>	<b>San Gabriel Valley</b>	<b>Southbay</b>	<b>Westside Central</b>
1)	Avalon	Agoura Hills	Alhambra	Carson	Beverly Hills
2)	Artesia	Burbank	Arcadia	El Segundo	Culver City
3)	Bell	Calabasas	Azusa	Gardena	Los Angeles
4)	Bell Gardens	Glendale	Baldwin Park	Hawthorne	Malibu
5)	Bellflower	Hidden Hills	Bradbury	Hermosa Beach	Santa Monica
6)	Cerritos	La Canada-Flintridge	Claremont	Inglewood	West Hollywood
7)	Commerce	Los Angeles	Covina	Lawndale	
8)	Compton	San Fernando	Diamond Bar	Lomita	
9)	Cudahy	Westlake Village	Duarte	Los Angeles	
10)	Downey		El Monte	Manhattan Beach	
11)	Hawaiian Gardens		Foothill	Palos Verdes Estates	
12)	Huntington Park		Glendora	Ranch Palos Verdes	
13)	Industry		Inwindale	Redondo Beach	
14)	La Habra Heights		La Puente	Rolling Hills	
15)	La Mirada		La Verne	Rolling Hills Estates	
16)	Lakewood		Los Angeles	Torrance	
17)	Long Beach		Monrovia		
18)	Los Angeles		Montebello		
19)	Lynwood		Monterey Park		
20)	Maywood		Pasadena		
21)	Norwalk		Pomona		
22)	Paramount		Rosemead		
23)	Pico Rivera		San Dimas		
24)	Santa Fe Springs		San Gabriel		
25)	Signal Hill		San Marino		
26)	South Gate		Sierra Madre		
27)	Vernon		South El Monte		
28)	Whittier		South Pasadena		
29)			Temple City		
30)			Walnut		
31)			West Covina		

**Appendix 1  
Municipal / Community Operators Located in Each Metro Service Sector**

	<b>Gateway</b>	<b>San Fernando Valley</b>	<b>San Gabriel Valley</b>	<b>South Bay</b>	<b>Westside Central</b>
1)	Bill Gardens Town Trolley (562) 806-8777 www.ci.bill-gardens.ca.us/about/town/trolley	Agoura Hills Dial-A-Ride (818) 707-2005 www.ci.agoura-hills.ca.us/transportation.html	City of Arcadia Transit & Dial-A-Ride (626) 445-2211 www.ci.arcadia.ca.us/enr/transportation/index.htm	Carson Circle & Dial-A-Ride (310) 352-3250 http://ci.carson.ca.us/MunicipalService/transportation/circle.htm	Culver City TBUS (310) 255-6600 www.ci.culver-city.ca.us/citypg_Duaa.html
2)	Baldwin Bus & Dial-A-Ride (562) 865-RIDE www.baldwin.org/transportation.htm	Burbank Local Transit (BLT) (818) 248-4259 www.ci.burbank.ca.us/blt/index.html	Alhambra Community Transit (626) 286-1220 http://ci.alhambra.org/about/transportation.html	El Segundo (310) 524-2704 http://www.elsegundo.org/transportation/community	High Trolley/ Shuttle (562) 565-3639 or (626) 458-3806
3)	Compton City Wheels (COW) & Dial-A-Ride (562) 528-4204 or (562) 928-4289 www.ci.compton.ca.us/wheels/COW.html	Calabasas Dial-A-Ride/ Calabasas Trolley (818) 878-4242 www.cityofcalabasas.com	Azusa Transit (626) 958-4287 www.ci.azusa.ca.us/transportation/azusa_transit.asp	Gardena Municipal Bus Lines (310) 324-1475 http://www.gardena.ca.us/Departmental_Transportation.htm	Los Angeles Department of Transportation (213) 310-323, 818) 808-2273 www.ladot.net.com
4)	Commerce Municipal Bus Lines (323) 387-4418 www.ci.commerce.ca.us/transportation.htm	Glendale Bus Line (818) 548-3980 www.cityofglendale.com	Baldwin Park Transit (626) 613-5215	Inglewood Shopper's Shuttle (310) 412-4378 www.inglobus.com	Santa Monica - (Big Blue Bus) (310) 451-5444
5)	Compton Renaissance Transit System (310) 695-5505	Los Angeles Department of Transportation (213) 310, 323, 818) 808-2273 www.ladot.net.com	Children's Court Shuttle (626) 459-9586	The Levitts Beat (310) 973-3270 http://www.levittsbeat.org/html/beat/index.html	West Hollywood Cityline (323) 583-8095 www.westholy.org
6)	Cudahy Area Rapid Transit (323) 772-5143 ext.233 www.cudahy-ca.us/area_rapid.html	MetroLink (600) 374-LINK www.metroink.com	Claremont Dial-A-Ride (909) 968-7864	Los Angeles Department of Transportation (213) 310, 323, 818) 808-2273 www.ladot.net.com	
7)	Downey Link (562) 528-LINK www.downeylink.org/residents/transit_service.php		Duarte Mini Transit System (626) 357-7931 ext. 248 www.ci.duarte.com/CommunityServices/duarteminitransit.asp	Palos Verdes Peninsula Transit (310) 544-7108 www.paloverdes.com/ptrtransit	
8)	Huntington Park Dial-A-Ride (323) 583-2163 http://www.huntingtonpark.org/city_services/ehnic_pg.html#car		East L.A. Shuttle (626) 485-3596 http://elast.co.la.ca.us/ehnicshuttle.html	Redondo Beach Wave (310) 372-1171 Ext. 2670 or Ext. 2511	
9)	La Mirada Transit & Dial-A-Ride (562) 943-6776 or (714) 521-0330 http://www.cityoflamirada.org/		El Monte Trolley Company (626) 443-7394 www.ci.el-monte.ca.us/CityGov/pe/tran/transportation/transit.html	Torrance Transit (310) 618-6286 www.ci.torrance.ca.us/city/dep/tran/index.html	
10)	Long Beach Transit (562) 591-2301 www.litransit.com		Footfall Transit (800-RIDE-INFO) www.footfalltransit.org		
11)	Los Angeles Department of Transportation (213) 310, 323, 818) 808-2273 www.ladot.net.com		Glendora Transit (Merceda Shuttle) (626) 944-6333 www.ci.glendora.ca.us/community_services/transportation.html		
12)	Lynwood Trolley Company (310) 803-0220 ext 287 www.lynwood.ca.us/Transport/trolleyco.html		La Puente Link (626) 855-1500 www.lapuentelink.org		
13)	Monterey Transit System (562) 928-5550 www.ci.monterey.ca.us/transportation.asp		Los Angeles Department of Transportation (213) 310, 323, 818) 808-2273 www.ladot.net.com		
14)	Pasadena Easy Rider Shuttle Dial-A-Ride (562) 220-2121 www.pasadenacity.com/easy_rider_transport.php		Monterey Bus Lines (323) 887-4800 www.cityofmonterey.com/mbtl.html		
15)	Santa Fe Springs Metro Express Shuttle (562) 928-5550 www.santafesprings.org/ptrtransit.html		Monrovia Transit (310) 358-3538 http://www.ci.monrovia.ca.us/community/mon_transit.htm		
16)	Whittier Transit/Whittier Dial-A-Ride (562) 698-2131 www.whittierci.org/index.html		Monterey Park Shuttle (626) 307-7842 www.ci.monterey-park.ca.us/transportation/epshuttle.html		
17)			Pasadena Area Rapid Transit System (ARTS) (626) 740-4035 www.ci.pasadena.ca.us		
18)			Pomona Valley Transportation Authority - Valley Connection (General Public) (909) 587-7684		
19)			Rosemead Shopping Express (818) 672-4089		
20)			Sierra Madre Dial-A-Ride (626) 355-3873		
21)			Temple City Dial-A-Ride (626) 286-2456		
22)			West Covina Shuttle & Dial-A-Ride (626) 938-9491 www.westcovina.org/transportation.html		





**APPENDIX 2**

**Line Assignment Responsibility By Metro Service Sectors  
Effective 2-1-04**

Line	Routes	Route Description
<b>GATEWAY</b>		
<b>Directly Operated</b>		
<b>18</b>		W. 6th St - Whittier Blvd.
<b>26</b>	26/51	7th St. -Virgil Av. -Franklin Av.- Avalon Bl.
<b>45</b>	45/46	Broadway -Mercury Av.
<b>60</b>	60/360	Long Beach Blvd. - Santa Fe Av.
<b>65</b>		Washington Blvd. - Indiana St. - Gage Av.
<b>66</b>	66/366	E. Olympic Blvd. - W 8th St.
<b>102</b>		E Jefferson Blvd.- Coliseum St.
<b>105</b>		Vernon Av. - La Cienega Blvd.
<b>200</b>		Alvarado St.- Echo Park Av.
<b>265</b>	265/275	Paramount Blvd. - Pico Rivera - Whittier - Cerritos
<b>362</b>		LA -Santa Fe Springs - Norwalk - Hawaiian Gardens
<b>460</b>		LA - Norwalk - Disneyland Express
<b>576</b>		S. Los Angeles - Pacific Palisades Express
<b>611</b>		Huntington Park Shuttle
<b>612</b>		South Gate Shuttle
<b>745</b>	Metro Rapid	South Broadway between Downtown Los Angeles and Metro Green (D) Line
<b>Contract Services</b>		
<b>58</b>	Contract	Washington Station - Union Station
<b>96</b>	Contract	LA - Riverside Dr.
<b>125</b>	Contract	Rosecrans Blvd.
<b>128</b>	Contract	MLK Jr. Transit Center - La Mirada
<b>130</b>	Contract	Artesia Blvd.
<b>167</b>	Contract	Plummer St. - Coldwater Canyon Av. - Chatsworth Transportation Center
<b>177</b>	Contract	Glendale - La Canada Flintridge - Pasadena - Arcadia - Monrovia - Duarte
<b>205</b>	Contract	Wilmington Blvd. - S. Western Av.
<b>214</b>	Contract	Artesia Transit Center Shuttle
<b>218</b>	Contract	Cedar Sinai Medical Center - Studio City - Loral Canyon Blvd.
<b>225</b>	225/226	LAX - Aviation Blvd. - Prospect Av. - Palos Verdes Dr. East & South
<b>232</b>	Contract	Pacific Coast Hwy.
<b>254</b>	Contract	Imperial - Wilmington Station - Gage Av. - Lorena St.
<b>256</b>	Contract	Eastern Av. - CSULA - Av.64 - North Hill Av.
<b>266</b>	Contract	Lakewood Blvd-Rosemead Blvd
<b>270</b>	Contract	Peck Rd. - Pioneer Blvd. - Studebaker Rd.
<b>603</b>	Contract	Rampart Bl. - Hoover St. - Colorado St.
<b>605</b>	Contract	Grand Vista Av. - LA County / USC Medical Center Shuttle
<b>608</b>	Contract	Crenshaw Connection
<b>625</b>	Contract	Aviation Metro Green Line Station Shuttle
<b>626</b>	Contract	Mariposa Metro Green Line Station Shuttle

Note:

Contract services are assigned to the Gateway Sector. However, changes to these services are coordinated with the other four (4) Service Sectors in which they operate.

**APPENDIX 2**

**Line Assignment Responsibility By Metro Service Sectors  
Effective 2-1-04**

Line	Routes	Route Description
<b>SAN FERNANDO VALLEY</b>		
<b>90</b>	90/91	LA - Sunland-Sylmar via Pennsylvania Av. & via La Crescenta Av.
<b>92</b>	92	LA - Glendale - Burbank - San Fernando - Glendale Blvd.
<b>94</b>	94/394	LA - San Fernando
<b>150</b>	150/240	Canoga Park - Ventura Blvd. / Reseda Blvd.- Ventura Boulevard to University City
<b>152</b>		Fallbrook Av. - Roscoe Blvd. -Vineland Av. - Burbank
<b>154</b>		Tampa Av. - Ventura Blvd. - Burbank Blvd - Oxnard St.
<b>156</b>		Panorama City / Van Nuys / N. Hollywood / Los Angeles City College
<b>158</b>		Devonshire St. - Woodman Av.
<b>161</b>		Thousand Oaks Transit Ctr. - Westlake - Canoga Park
<b>163</b>		Sherman Way - Hollywood Blvd.
<b>165</b>	164/165	Vanowen St. / Victory Blvd.
<b>166</b>		Nordhoff St. - Lankershim Blvd.
<b>168</b>		Lassen St. - Paxton St.
<b>169</b>		Saticoy St. - Sunland Blvd.
<b>230</b>	230/239	Laurel Canyon Blvd. / White Oak Av. - Zelzah Av. - Rinaldi St.
<b>233</b>		Lakeview Terrace/Van Nuys Blvd./Sherman Oaks
<b>234</b>	183/234	Sepulveda Blvd. - Brand Blvd. - Sayre St. / Magnolia Blvd. - Kenneth Rd. - E. Colorado St.
<b>236</b>		Balboa Blvd. - Glenoaks Blvd. - Sylmar / Rinaldi St. - Woodley Av. - Van Nuys
<b>243</b>		De Soto Av. - Ventura Blvd. - Winnetka Av.- Porter Ranch
<b>245</b>		Topanga Cyn. Blvd. - Mulholland Dr. - Valley Circle Blvd.
<b>418</b>		Canoga Park - Roscoe Blvd. - Northridge - North Hollywood
<b>426</b>		Canoga Park - Sherman Way - Victory Blvd. - North Hollywood
<b>653</b>	651/653 (Special)	Sherman Oaks-Hollywood Bowl / Canoga Park-Hollywood Bowl
<b>657</b>	(Special)	Torrance-Hollywood Bowl
<b>750</b>	Metro Rapid	Ventura Bl between Universal City and Warner Center
<b>761</b>	Metro Rapid	Van Nuys Bl. between Westwood to Pacoima

**APPENDIX 2**

**Line Assignment Responsibility By Metro Service Sectors  
Effective 2-1-04**

Line	Routes	Route Description
<b>SAN GABRIEL VALLEY</b>		
<b>28</b>	28/328/ 83/84/85	W Olympic Blvd. / Pasadena Av. -York Blvd. / Cypress Av-Eagle Rock Blvd. / Verdugo Rd.- Glendale College
<b>70</b>	70-370	LA - El Monte via Garvey Av.
<b>76</b>		LA - El Monte via Valley Blvd.
<b>78</b>	78/79	LA - Alhambra - South Arcadia via Las Tunas Dr & via Huntington Dr.
<b>81</b>	81/381	Figueroa St
<b>170</b>		Hellman Av. - El Monte via South El Monte
<b>175</b>		Fountain Av. - Talmadge St. - Hyperion Av.
<b>176</b>		Glassell Park - Highland Park - Alhambra - El Monte
<b>180</b>	180/181/380	Hollywood - Glendale - Pasadena - N. Lake via Colorado Blvd. & PCC via Yosemite Dr.
<b>201</b>		Silverlake Blvd.
<b>251</b>	251/252/350	Soto St. - Daly St. / Soto St. - Huntington Dr.
<b>255</b>		Griffin Av. - County Hospital - Rowan Av.
<b>259</b>	258/259	Eastern Av. - Arizona Av. - Emery Park / Arizona Av. - Alhambra
<b>260</b>	260/361	Artesia Station - Pasadena - Altadena via Atlantic Blvd.
<b>264</b>		San Gabriel Blvd. - Altadena Dr.
<b>267</b>		Temple City Blvd. - Del Mar Blvd. - Lincoln Av.
<b>268</b>		Washington Blvd. - Baldwin Av.
<b>484</b>		LA - El Monte - La Puente - Pomona - Ontario Express
<b>485</b>		Los Angeles/Altadena via Lake Ave. Express
<b>487</b>	487/491	LA - San Gabriel - Sierra Madre Express & Santa Anita Av. Express
<b>489</b>		LA - Hastings Ranch Express
<b>490</b>		LA - El Monte - Covina - Diamond Bar - Brea Express
<b>620</b>		Boyle Heights Shuttle
<b>686</b>		Arroyo Parkway/Colorado Avenue/Allen Avenue
<b>687</b>		Los Robles Ave.

**APPENDIX 2**

**Line Assignment Responsibility By Metro Service Sectors  
Effective 2-1-04**

Line	Routes	Route Description
<b>SOUTH BAY</b>		
<b>40</b>	40/340/442	Hawthorne Blvd -LAX - LA Union Station
<b>42</b>		LA Union Station / M.L. King Jr. Bl./ LAX City Bus Center
<b>53</b>		Central Av.
<b>55</b>		LA - Compton Av. - Imperial Station
<b>107</b>		54th St. - Fairview Blvd. - Santa Ana St.
<b>108</b>	108/358	Slauson Av.
<b>110</b>		Gage Ave - Centinela Ave - Fox Hills Mall
<b>111</b>		LAX - Florence Ave - Leffingwell Rd.
<b>115</b>	115/315	Manchester Av. - Firestone Blvd.
<b>117</b>		Century Blvd. - Tweedy Blvd. - Rancho Los Amigos
<b>119</b>	119/126	108th St. / Yukon Av. - Manhattan Beach Blvd
<b>120</b>	120/121	LAX - Imperial Hwy. - Norwalk Metrolink
<b>124</b>		El Segundo Blvd. - Santa Fe Av.
<b>127</b>		Compton Blvd. - Bellflower Blvd.
<b>202</b>		Willowbrook - Compton - Wilmington
<b>204</b>	204/354	Vermont Av.
<b>206</b>		Normandie Av.
<b>207</b>	207/357	Western Av. - 120th St.
<b>209</b>		Van Ness Av. - Arlington Av.
<b>210</b>	210/310	Vine St. - Crenshaw Blvd.
<b>211</b>	211/215	Prairie Av. / Inglewood Av. - Redondo Beach - Del Amo Center
<b>212</b>		La Brea Av.
<b>305</b>		W. Hollywood - Rosa Parks (Imperial / Wilmington) Station
<b>439</b>		LA - LAX - Redondo Beach Express
<b>444</b>		LA - W. Torrance - Rolling Hills - Rancho Palos Verdes Express
<b>445</b>		LA - Alpine Village - San Pedro Express
<b>446</b>	446/447	LA - Carson - Wilmington - San Pedro Express & Wilmington - San Pedro - 7th St. Express
<b>550</b>		San Pedro / W. Hollywood Express
<b>681</b>		Huntington Park - Watts Shuttle
<b>710</b>	Metro Rapid	Crenshaw
<b>711</b>	Metro Rapid	Florence & Garfield to Inglewood Transit Center
<b>754</b>	Metro Rapid	Vermont Avenue between Hollywood and Metro Green (D) Line

**APPENDIX 2**

**Line Assignment Responsibility By Metro Service Sectors  
Effective 2-1-04**

<b>Line</b>	<b>Routes</b>	<b>Route Description</b>
<b>Westside/Central</b>		
<b>2</b>	2/302	Sunset Blvd. -Beverly Dr.
<b>4</b>	4/304	Santa Monica Blvd.
<b>10</b>	10/11/48	Melrose Av. - Virgil Av. -Temple St. - San Pedro
<b>14</b>	14/37	Beverly Blvd. - W. Adams Blvd
<b>16</b>	16/316	W. 3rd St.
<b>20</b>	20/21	Wilshire Blvd. -UCLA -Santa Monica
<b>30</b>	30/31	W Pico Blvd. - E. 1st St. - Floral Dr.
<b>33</b>	33/333	Venice Blvd.
<b>38</b>	38/71	W. Jefferson Blvd. / City Terrace
<b>68</b>		W. Washington Blvd. - Chavez Av.
<b>217</b>		Hollywood Blvd. - Fairfax Av.
<b>220</b>		Robertson Blvd. - Culver Blvd. - LAX
<b>434</b>		LA - Santa Monica - Malibu - Trancas Express
<b>652</b>	Special	West Los Angeles-Hollywood Bowl
	Metro	Wilshire Bl & Whittier Bl between Santa Monica and
<b>720</b>	Rapid	Commerce









**Appendix 3**  
**Directly Operated Metro Road Calls By Division**  
**(Mean Miles Between Mechanical Failures)**

MONTH	CATEGORIES	Div 1	Div 2	Div 3	Div 5	Div 6	Div 7	Div 8	Div 9	Div 10	Div 13	Div 18	Systemwide	
Nov-02	Hub Miles	528,400	528,300	724,500	748,800	154,900	916,900	655,500	755,300	894,600	900,500	1,068,400	7,879,900	
	NO. OF MECHANICAL CHARGEABLE ROAD CALLS	47	85	146	76	29	170	87	75	160	85	193	1,153	
	NO. OF MECHANICAL ROAD CALLS	78	117	257	175	36	183	108	118	237	149	212	1,808	
	Mean Miles Between Mechanical Failure	11,264	6,215	4,952	9,850	5,341	5,394	7,534	10,071	5,591	10,594	5,538	6,832	
Dec-02	Hub Miles	588,300	529,600	736,800	835,900	144,500	944,900	688,700	777,300	944,300	951,100	1,136,500	8,237,600	
	NO. OF MECHANICAL CHARGEABLE ROAD CALLS	52	80	134	103	23	159	53	71	141	107	161	1,064	
	NO. OF MECHANICAL ROAD CALLS	101	72	199	170	26	169	104	129	243	160	187	1,590	
	Mean Miles Between Mechanical Failure	10,929	8,827	5,499	8,195	6,283	5,943	12,017	10,948	6,697	8,889	7,059	7,742	
Jan-03	Hub Miles	592,300	520,700	729,700	878,700	183,200	964,300	882,400	800,500	950,100	944,800	1,135,100	8,388,800	
	NO. OF MECHANICAL CHARGEABLE ROAD CALLS	50	52	132	110	16	159	45	83	144	104	161	1,127	
	NO. OF MECHANICAL ROAD CALLS	91	74	219	168	22	178	103	223	162	170	244	1,654	
	Mean Miles Between Mechanical Failure	11,846	10,129	5,528	7,997	11,450	6,065	15,164	9,645	6,588	9,085	4,893	7,443	
Feb-03	Hub Miles	550,900	462,700	656,900	780,100	176,300	843,700	614,300	725,900	858,000	880,900	1,006,500	7,558,200	
	NO. OF MECHANICAL CHARGEABLE ROAD CALLS	68	50	76	97	20	157	67	51	153	86	165	1,022	
	NO. OF MECHANICAL ROAD CALLS	104	68	181	140	24	171	112	154	170	136	198	1,458	
	Mean Miles Between Mechanical Failure	8,101	9,654	8,643	8,042	8,815	5,374	9,199	14,233	5,608	9,763	5,172	7,395	
Mar-03	Hub Miles	578,900	531,600	718,300	873,600	183,900	942,800	858,600	785,700	930,500	969,700	1,095,700	8,267,300	
	NO. OF MECHANICAL CHARGEABLE ROAD CALLS	60	58	134	93	29	194	39	76	205	130	242	1,230	
	NO. OF MECHANICAL ROAD CALLS	107	72	190	184	35	207	87	176	223	166	253	1,700	
	Mean Miles Between Mechanical Failure	9,648	9,186	5,346	9,384	6,341	4,880	16,887	10,338	4,539	9,697	4,528	6,721	
Apr-03	Hub Miles	563,700	527,200	705,700	852,000	189,500	888,700	645,300	785,200	893,700	931,700	1,123,800	8,104,500	
	NO. OF MECHANICAL CHARGEABLE ROAD CALLS	62	82	133	92	22	188	47	69	168	104	199	1,196	
	NO. OF MECHANICAL ROAD CALLS	95	115	150	176	22	196	94	150	217	188	205	1,588	
	Mean Miles Between Mechanical Failure	9,092	6,429	5,306	9,261	8,614	4,716	13,730	11,380	4,514	9,959	5,947	6,776	
May-03	Hub Miles	571,800	518,100	711,300	856,300	176,400	913,600	637,200	782,800	873,600	920,900	1,121,500	8,082,600	
	NO. OF MECHANICAL CHARGEABLE ROAD CALLS	49	75	151	107	26	189	79	74	175	104	286	1,315	
	NO. OF MECHANICAL ROAD CALLS	88	87	232	167	28	199	118	187	201	185	293	1,755	
	Mean Miles Between Mechanical Failure	11,671	6,908	4,711	7,993	6,785	4,834	8,066	10,578	4,982	8,855	3,921	6,146	
Jun-03	Hub Miles	505,900	515,000	692,900	898,900	173,200	848,700	631,300	758,900	903,600	937,900	1,107,800	7,970,600	
	NO. OF MECHANICAL CHARGEABLE ROAD CALLS	86	59	123	123	13	181	82	69	187	120	236	1,259	
	NO. OF MECHANICAL ROAD CALLS	109	73	174	169	14	198	133	168	201	211	248	1,716	
	Mean Miles Between Mechanical Failure	7,865	8,739	5,633	7,292	13,323	4,678	7,699	10,899	4,832	7,816	4,694	6,331	
FY03	Hub Miles													97,582,600
	NO. OF MECHANICAL CHARGEABLE ROAD CALLS													14,178
	NO. OF MECHANICAL ROAD CALLS													20,152
	Mean Miles Between Mechanical Failure													6,883



**METRO WEEKDAY BUS SYSTEM DATA BY SECTOR AND CONTRACT SERVICES  
DIRECTLY OPERATED EFFECTIVE 2-1-04  
CONTRACT SERVICES 12-21-03**

**APPENDIX 4**

Metro Bus System Weekday Summary by Service Sector and Contract Services									
Service Sector	Boardings	Revenue Hours	Boardings Per Hour	Boardings Per Peak Vehicle	Scheduled Peak Vehicles	Weekday Load factor compliance @ 1.20	Early %	On Time %	Late %
Gateway	178,413	2,944	60.6	574	311	95.72%	15.3	63.5	21.3
San Fernando Valley	187,112	3,752	49.9	506	370	96.61%	15.8	65.5	18.7
San Gabriel Valley	195,720	3,952	49.5	559	350	99.12%	11.7	66.8	21.5
South Bay	314,162	5,183	60.6	617	509	97.25%	16.5	62.7	20.8
Westside Central	301,679	5,188	58.1	553	546	97.49%	14.4	63.1	22.5
Contract Services	31,275	1,441	21.7	222	141	95.84%	N/A	N/A	N/A
<b>Metro System Total:</b>	<b>1,208,361</b>	<b>22,279</b>	<b>54.2</b>	<b>543</b>	<b>2227</b>	<b>97.15%</b>	<b>14.8</b>	<b>64.4</b>	<b>20.8</b>

Parent Lines	Route(s)	Route Description	Direction	Current Sector	Current Division	Boardings	Revenue Hours	Boardings Per Hour	Boardings Per Peak Vehicle	Scheduled Peak Vehicles	Weekday Load factor compliance @ 1.20	On-time Performance		
												Early %	On Time %	Late %
2	2 & 302	Sunset Blvd. - Beverly Dr.	E/W	WC	7 & 10	23,766	466.0	51.0	553	43	97.67%	17.9	60.7	21.3
4	4-304	Santa Monica Blvd.	E/W	WC	6, 7, & 10	34,378	609.6	56.4	537	64	99.04%	15.5	61.5	23.0
10	10-11-48	Melrose Ave. - Virgil Ave. - Temple St. - San Pedro	E/W	WC	2 & 7	16,205	293.7	55.2	523	31	99.08%	14.0	67.1	18.9
14	14-37	Beverly Blvd. - W. Adams	E/W	WC	7	22,925	368.1	62.3	573	40	97.40%	19.5	66.5	14.0
16	16-316	W. 3rd St.	E/W	WC	1, 2, 7, & 10	26,497	399.1	66.4	564	47	96.33%	12.6	62.4	25.0
18	18	W. 6th St. - Whittier Blvd.	E/W	G	1 & 2	24,261	307.2	79.0	899	27	95.99%	14.1	69.4	16.5
20	20-21	Wilshire Blvd. - UCLA - Santa Monica	E/W	WC	6 & 10	21,531	401.6	53.6	478	45	99.49%	13.1	59.9	27.0
26	26-51-52-352	7th St. - Virgil Ave. - Franklin Ave. - Avalon Blvd. - W Olympic Blvd. / Pasadena Ave. - York Blvd. / Cypress Av - Eagle Rock Blvd. / Verdugo Rd. - Glendale College	N/S	G	1 & 2	26,141	400.1	65.3	608	43	98.27%	14.3	69.1	16.6
28	28-328 83-84-85	W Pico Blvd. - E. 1st St. - Floral Dr.	E/W	SGV	3 & 9	37,006	591.8	62.5	661	56	99.38%	11.8	66.7	21.5
30	30-31	W Pico Blvd. - E. 1st St. - Venice Blvd.	E/W	WC	7 & 10	32,278	415.7	77.6	807	40	96.12%	11.8	74.3	13.9
33	33-333	W. Jefferson Blvd. / City Terrace	E/W	WC	6 & 10	25,488	502.8	50.7	490	52	97.05%	13.8	61.1	25.2
38	38-71	Hawthorne Blvd - LAX - LA Union Station	N/S	SB	10 & 18	27,088	427.9	63.3	576	47	98.60%	14.3	58.4	27.3
42	42	LA Union Station / M.L. King Jr. Bl / LAX City Bus Center	N/S	SB	5, 10, & 18	4,540	104.9	43.3	349	13	100.00%	15.0	60.0	25.1
45	45-46	Broadway - Mercury Ave.	E/W	G	1 & 2	19,485	265.7	73.3	779	25	93.98%	11.0	67.8	21.1
53	53	Central Ave.	N/S	SB	18	15,981	221.6	72.1	666	24	98.70%	15.8	67.6	16.5
55	55	LA - Compton Ave. - Imperial Station	N/S	SB	1, 2, & 18	12,592	212.4	59.3	484	26	88.33%	13.8	65.4	20.8
58	58	Washington Station - Union Station	N/S	G	97	262	38.3	6.8	66	4	N/A	N/A	N/A	N/A
60	60-360	Long Beach Blvd. - Santa Fe Ave.	N/S	G	1, 2, & 18	26,542	467.2	56.8	603	44	95.06%	10.7	56.9	32.4
65	65	Washington Blvd. - Indiana St. - Gage Ave.	E/W	G	1 & 2	2,580	63.5	40.6	369	7	N/A	14.0	70.5	15.5

METRO WEEKDAY BUS SYSTEM DATA  
DIRECTLY OPERATED EFFECTIVE 2-1-04  
CONTRACT SERVICES 12-21-03

APPENDIX 4

Parent Lines	Route(s)	Route Description	Direction	Current Sector	Current Division	Boardings	Revenue Hours	Boardings Per Hour	Boardings Per Peak Vehicle	Scheduled Peak Vehicles	Weekday Load factor compliance @ 1.20	On-time Performance		
												Early %	On Time %	Late %
66	66-366	E. Olympic Blvd. - W 8th St.	E/W	G	1 & 2	27,096	362.9	74.7	521	52	89.36%	12.3	74.0	13.6
68	68	W. Washington Blvd. - Chavez Ave.	E/W	WC	7 & 10	24,231	335.0	72.3	713	34	97.74%	13.9	67.0	19.1
70	70-370	LA - El Monte via Garvey Ave.	E/W	SGV	3 & 9	15,620	279.6	55.9	744	21	99.14%	10.6	71.9	17.4
76	76	LA - El Monte via Valley Blvd.	E/W	SGV	9	10,849	214.1	50.7	638	17	100.00%	11.1	74.0	14.9
78	78-79	LA - Alhambra - South Arcadia via Las Tunas Dr & via Huntington Dr.	E/W	SGV	3 & 9	11,350	261.5	43.4	454	25	96.62%	15.1	71.7	13.2
81	81-381	Figueras St	N/S	SGV	3 & 18	21,985	372.1	58.8	644	34	99.08%	12.2	70.9	16.9
90	90-91	LA - Sunland-Sylmar via Pennsylvania Ave. & via La Crescenta Ave.	N/S	SFV	15	6,171	168.0	36.7	411	15	97.97%	14.4	69.6	16.0
92	92	LA - Glendale - Burbank - San Fernando - Glendale Blvd.	N/S	SFV	15	9,766	227.1	43.0	543	18	99.67%	23.7	61.2	15.1
94	94-394	LA - San Fernando	N/S	SFV	15	16,030	375.6	42.7	445	36	97.63%	16.4	63.7	19.9
96	96	LA-Riverside Dr	ES/WN	G	95 & 96	2,719	122.8	22.1	247	11	N/A	N/A	N/A	N/A
102	102	E Jefferson Blvd. - Coliseum St.	E/W	G	2	971	34.8	27.9	243	4	N/A	18.3	64.8	16.8
105	105	Vernon Ave. - La Cienega Blvd.	E/W	G	1, 2, & 7	18,005	268.7	67.0	720	25	95.13%	14.3	63.0	22.7
107	107	54th St. - Fairview Blvd. - Santa Ana St.	E/W	SB	5	1,306	50.0	26.1	435	3	N/A	18.8	69.7	11.5
108	108	Slauson Ave.	E/W	SB	5 & 18	16,960	263.4	64.4	606	28	98.05%	19.4	57.6	23.0
110	110	Gage Ave - Centinela Ave - Fox Hills Mall	E/W	SB	5	10,976	200.2	54.8	523	21	97.11%	18.1	61.3	20.5
111	111	LAX - Florence Ave - Leffingwell Rd.	E/W	SB	5 & 18	16,236	225.5	72.0	902	18	97.74%	17.0	57.6	25.4
115	115-315	LAX-Manchester Ave. - Firestone Blvd.	E/W	SB	5 & 18	17,449	260.4	67.0	646	27	97.93%	21.9	58.5	19.6
117	117	LAX-Century Blvd. - Tweedy Blvd. - Rancho Los Amigos	E/W	SB	5 & 18	10,462	167.7	62.4	872	12	N/A	17.4	62.9	19.8

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DIRECTLY OPERATED EFFECTIVE 2-1-04  
CONTRACT SERVICES 12-21-03**

**APPENDIX 4**

Parent Lines	Route(s)	Route Description	Direction	Current Sector	Current Division	Boardings	Revenue Hours	Boardings Per Hour	Boardings Per Peak Vehicle	Scheduled Peak Vehicles	Weekday Load factor compliance @ 1.20	Early %	On Time %	Late %
119	119-126	108th St. / Yukon Ave. - Manhattan Beach Blvd	E/W	SB	5 & 18	937	29	32.3	312	3	N/A	18.3	68.7	13.0
120	120-121	LAX - Imperial Hwy. - Norwalk Metrolink	E/W	SB	18	6,206	120.8	51.4	621	10	100.00%	11.1	63.5	25.4
124	124	El Segundo Blvd. - Santa Fe Av.	E/W	SB	18	1,558	33.8	46.1	519	3	N/A	23.0	68.3	8.7
125	125	Rosecrans Blvd	E/W	G	91	3,779	134.5	28.1	252	15	85.92%	N/A	N/A	N/A
127	127	Compton Blvd. - Bellflower Blvd.	E/W	SB	18	939	29.2	32.2	470	2	N/A	9.8	67.1	23.1
128	128	MLK Jr. Transit Center - La Mirada	E/W	G	91	878	42.0	20.9	220	4	N/A	N/A	N/A	N/A
130	130	Artesia Blvd	E/W	G	91	1,608	98.7	16.3	146	11	92.98%	N/A	N/A	N/A
150	150-240	Canoga Park - Ventura Blvd. / Reseda Blvd. - Ventura Boulevard to University City	E/W	SFV	18	13,894	313.6	44.3	515	27	100.00%	11.0	74.8	14.2
152	152	Fallbrook Ave. - Roscoe Blvd. - Vineland Ave. - Burbank	E/W	SFV	8 & 15	11,423	219.3	52.1	544	21	95.02%	12.2	69.7	18.2
154	154	Tampa Ave. - Ventura Blvd. - Burbank Blvd - Oxnard St.	E/W	SFV	8 & 15	2,557	69.7	36.7	320	8	N/A	23.9	60.4	15.7
156	156	Panorama City / Van Nuys / N. Hollywood / Los Angeles City College	E/W	SFV	8 & 15	17,288	249.2	69.4	823	21	99.33%	17.7	55.5	26.8
158	158	Devonshire St. - Woodman Ave.	E/W	SFV	8 & 15	2,258	56.1	40.2	376	6	100.00%	14.1	70.5	15.3
161	161	Thousand Oaks Transit Center - Westlake - Canoga Park	E/W	SFV	8	1,513	61.6	24.6	168	9	100.00%	15.9	75.8	8.2
163	163	Sherman Way - Hollywood Blvd.	E/W	SFV	8 & 15	12,593	214.2	58.8	630	20	100.00%	19.9	62.9	17.2
165	164-165	Vanowen St. / Victory Blvd.	E/W	SFV	8 & 15	19,252	346.3	55.6	550	35	94.04%	21.0	63.8	15.2
166	166	Nordhoff St. - Lankershim Blvd.	E/W	SFV	8 & 15	12,657	213.8	59.2	452	28	87.18%	13.5	63.9	22.6
167	167	Plummer St.-Coldwater Canyon Av.-Chatsworth Transportation Center	ES/WN	G	95	1,937	83.2	23.3	194	10	98.61%	N/A	N/A	N/A
168	168	Lassen St. - Paxton St.	E/W	SFV	8	815	27.4	29.7	408	2	N/A	11.1	66.1	20.8
169	169	Saticoy St. - Sunland Blvd.	E/W	SFV	8 & 15	2,893	61.1	47.3	482	6	94.36%	29.9	49.3	20.7

METRO WEEKDAY BUS SYSTEM DATA  
DIRECTLY OPERATED EFFECTIVE 2-1-04  
CONTRACT SERVICES 12-21-03

Parent Lines	Route(s)	Route Description	Direction	Current Sector	Current Division	Boardings	Revenue Hours	Boardings Per Hour	Boardings Per Peak Vehicle	Scheduled Peak Vehicles	Weekday Load factor compliance @ 1.20	On-time Performance		
												Early %	On Time %	Late %
170	170	CSULA-Hellman Ave. - El Monte via South El Monte	E/W	SGV	9	1,280	57.2	22.4	320	4	N/A	16.3	62.4	21.3
175	175	Fountain Ave. - Taimadge St. - Hyperion Ave. Glassell Park - Highland Park - Alhambra - El Monte	E/W	SGV	3	1,461	28.0	52.2	365	4	97.36%	9.2	49.5	41.3
176	176	Glendale-JPL-Pasadena-Arcadia-Monrovia-Duarte	E/W	SGV	3 & 9	1,802	44.7	40.3	601	3	N/A	N/A	N/A	N/A
177	177	Hollywood - Glendale - Pasadena - N. Lake via Colorado Blvd. & PCC via Yosemite Dr.	E/W	G	91	241	27.2	8.9	121	2	N/A	N/A	N/A	N/A
180	180-181-380	Alvarado St. - Echo Park Ave.	E/W	SGV	3 & 9	19,280	334.8	57.6	714	27	N/A	9.7	61.3	29.0
200	200	Silverlake Blvd.	N/S	G	1 & 2	14,235	180.7	78.8	837	17	98.72%	18.3	76.9	4.8
201	201	Willowbrook - Compton - Wilmington	N/S	SGV	3	1,456	45.9	31.7	291	5	N/A	0.0	78.8	21.2
202	202	Vermont Ave.	N/S	SB	18	1,506	61.4	24.5	377	4	N/A	7.5	82.8	9.7
204	204	Wilmington Blvd - S	N/S	SB	5 & 18	27,173	276.9	98.1	1,235	22	95.61%	21.3	62.3	16.4
205	205	Western Av	N/S	G	91	2,259	122.7	18.4	188	12	98.01%	N/A	N/A	N/A
206	206	Normandie Ave.	N/S	SB	3, 5, & 18	15,844	215.1	73.7	689	23	94.21%	19.5	67.0	13.5
207	207-357	Western Ave. - 120th St. Van Ness Ave. - Arlington Ave.	N/S	SB	5 & 18	36,828	407.8	90.3	944	39	98.39%	16.2	68.0	15.8
209	209	Vine St. - Crenshaw Blvd. Prairie Ave. / Inglewood Ave. - Redondo Beach - La Brea Ave.	N/S	SB	5	1,403	49.3	28.5	281	5	N/A	19.1	72.3	8.5
210	210-310	Del Amo Center	N/S	SB	18	21,263	201.8	105.4	1,418	15	99.60%	13.0	60.0	26.9
211	211-215	Artesian Transit center	N/S	SB	18	1,664	55.1	30.2	208	8	100.00%	16.2	51.6	32.2
212	212	Shuttle	N/S	SB	5 & 18	12,502	206.2	60.6	544	23	96.10%	18.3	59.3	22.4
214	214	Hollywood Blvd. - Fairfax Ave.	N/S	G	96	245	27.5	8.9	61	4	N/A	N/A	N/A	N/A
217	217		N/S	WC	7	17,171	257.8	66.6	687	25	99.37%	16.2	66.1	17.8

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DIRECTLY OPERATED EFFECTIVE 2-1-04  
CONTRACT SERVICES 12-21-03**

**APPENDIX 4**

Parent Lines	Route(s)	Route Description	Direction	Current Sector	Current Division	Boardings	Revenue Hours	Boardings Per Hour	Boardings Per Peak Vehicle	Scheduled Peak Vehicles	Weekday Load factor compliance @ 1.20	On-time Performance		
												Early %	On Time %	Late %
218	218	Cedar Sinai Medical Center - Studio City - Laurel Canyon Blvd.	N/S	G	94	1,309	54.7	23.9	218	6	N/A	N/A	N/A	N/A
220	220	Robertson Blvd. - Culver Blvd. - LAX	N/S	WC	7	897	42.7	21.0	299	3	N/A	10.7	60.9	28.4
225	225-226	LAX-Aviation Blvd-Prospect Av-Palos Verdes Dr East/LAX-Aviation Blvd-Prospect Av-Palos Verdes Dr South	N/S	G	91	103	17.7	5.8	34	3	100.00%	N/A	N/A	N/A
230	230-239	Laurel Canyon Blvd. / White Oak Ave. - Zelzah Ave. - Rinaldi St.	N/S	SFV	15	5,926	123.9	47.8	539	11	98.68%	13.1	68.8	18.1
232	232	Pacific Coast Hwy	N/S	G	91	3,916	169.5	23.1	230	17	95.38%	N/A	N/A	N/A
233	233	Lakeview Terrace/Van Nuys Blvd./Sherman Oaks	N/S	SFV	15	10,101	135.6	74.5	1,122	9	90.15%	23.9	59.4	16.7
234	234-183	Sepulveda Blvd. - Brand Blvd. - Sayre St. / Magnolia Blvd. - Kenneth Rd. - E. Colorado St.	N/S	SFV	15	13,319	241.1	55.2	579	23	97.02%	15.4	70.4	14.1
236	236-237	Balboa Blvd. - Glenoaks Blvd. - Sylmar / Rinaldi St. - Woodley Ave. - Van Nuys De Soto Ave. - Ventura	N/S	SFV	8	2,434	68.2	35.7	348	7	95.83%	8.8	69.4	21.8
243	243	Porter Ranch Blvd. - Winnetka Ave. - Topanga Cyn. Blvd. - Mulholland Dr. - Valley Circle Blvd.	E/W	SFV	8	3,421	74.0	46.2	380	9	98.57%	14.9	75.2	9.9
245	245	Soto St./Ave. 26/California Ave.	N/S	SFV	8	1,981	49.5	40.0	396	5	N/A	8.7	82.6	8.7
251	251-350	Soto St./Huntington Dr.	N/S	SGV	3 & 18	21,045	319.4	65.9	779	27	100.00%	9.9	66.0	24.1
252	252	Imperial-Wilmington St-Gage Av-Lorena St	N/S	SGV	3 & 18	2,204	38.7	57.0	735	3	N/A	10.6	75.6	13.7
254	254	Griffin Ave. - County Hospital - Rowan Ave.	N/S	G	91	537	49.6	10.8	134	4	N/A	N/A	N/A	N/A
255	255	Hospital - Rowan Ave.	N/S	SGV	3	2,194	31.3	70.1	1,097	2	N/A	0.0	50.0	50.0



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DIRECTLY OPERATED EFFECTIVE 2-1-04  
CONTRACT SERVICES 12-21-03**

**APPENDIX 4**

Parent Lines	Route(s)	Route Description	Direction	Current Sector	Current Division	Boardings	Revenue Hours	Boardings Per Hour	Boardings Per Peak Vehicle	Scheduled Peak Vehicles	Weekday Load factor compliance @ 1.20	On-time Performance		
												Early %	On Time %	Late %
256	256	Eastern Av-CSULA-Avenue 64-North Hill Av	N/S	G	98	948	81.9	11.6	158	6	N/A	N/A	N/A	N/A
259	258-259	Eastern Ave. - Arizona Ave. - Emery Park / Arizona Ave. - Alhambra Artesia Station - Pasadena - Altadena Via Atlantic Blvd.	N/S	SGV	9	2,000	65.4	30.6	400	5	N/A	11.9	71.9	16.2
260	260-361	Altadena Via Atlantic Blvd.	N/S	SGV	3, 9, & 18	17,903	316.9	56.5	597	30	98.46%	10.2	67.8	22.0
264	264	Duarte Rd. - Altadena Dr.	N/S	SGV	9	768	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
265	265-275	Paramount Blvd. - Pico Rivera - Whittier - Cerritos Lakewood Blvd-Rosemead Blvd	N/S	SB	18	1,647	62.7	26.3	329	5	N/A	17.7	56.5	25.8
266	266	Temple City Blvd. - Del Mar Blvd. - Lincoln Ave. Washington Blvd. - Peck Rd-Pioneer Blvd-Studebaker Rd	N/S	G	91	2,709	88.9	30.5	387	7	100.00%	N/A	N/A	N/A
267	267	UCLA-W. Hollywood - Rosa Parks (Imperial / Wilmington) Station	N/S	SGV	3 & 9	2,558	114.1	22.4	284	9	N/A	12.4	70.0	17.6
268	268	LA - Santa Fe Springs - Norwalk - Hawaiian Gardens	N/S	SGV	9	2,469	73.0	33.8	274	9	100.00%	21.1	63.4	15.5
270	270	Canoga Park - Roscoe Blvd. - Northridge - North Hollywood	N/S	G	91	1,334	71.5	18.7	222	6	N/A	N/A	N/A	N/A
305	305	Canoga Park - Sherman Way - Victory Blvd. - North Hollywood	N/S	SB	7 & 18	4,132	136.4	30.3	376	11	N/A	21.3	52.7	26.0
362	362	LA - Santa Monica - Malibu - Trancas Express	E/W	G	1	3,458	100.9	34.3	346	10	N/A	16.4	66.4	17.2
418	418	LA - LAX - Redondo Beach Express	E/W	SFV	8	1,303	34.1	38.2	217	6	N/A	20.5	56.0	23.5
426	426	LA - W. Torrance - Rolling Hills - Rancho Palos Verdes Express	E/W	SFV	8	1,677	33.0	50.8	335	5	N/A	13.3	55.0	31.7
434	434		E/W	WC	6 & 10	2,954	130.3	22.7	148	20	99.06%	17.1	46.8	36.2
439	439		N/S	SB	18	1,811	108.7	16.7	226	8	N/A	11.9	62.1	25.9
444	444		N/S	SB	18	2,320	100.7	23.0	155	15	99.45%	19.6	55.6	24.9

Parent Lines	Route(s)	Route Description	Direction	Current Sector	Current Division	Boardings	Revenue Hours	Boardings Per. Hour	Boardings Per Peak Vehicle	Scheduled Peak Vehicles	Weekday Load factor @ 1.20	On-time Performance		
												Early %	On Time %	Late %
445	445	LA - Alpine Village - San Pedro Express	N/S	SB	18	877	49.3	17.8	219	4	N/A	18.2	75.8	6.1
446	446-447	LA - Carson - Wilmington - San Pedro Express & Wilmington - San Pedro - 7th St. Express	N/S	SB	10 & 18	4,105	154.8	26.5	316	13	99.27%	16.5	56.4	27.1
460	460	LA - Norwalk - Disneyland Express	E/W	G	1 & 2	2,847	148.7	19.1	158	18	100.00%	15.5	46.3	38.2
484	484	LA - El Monte - La Puente - Pomona	E/W	SGV	9	6,636	220.3	30.1	349	19	99.68%	13.5	60.0	26.5
485	485	LA - Altadena via Fair Oaks Ave. Express & Altadena via Lake Ave. Express	N/S	SGV	3 & 9	3,581	117.8	30.4	358	10	N/A	13.3	61.3	25.4
487	487-491	LA - San Gabriel - Sierra Madre Express & Santa Anita Ave. Express	E/W	SGV	3 & 9	3,076	126.1	24.4	220	14	98.95%	14.9	62.1	23.1
489	489	LA - Hastings Ranch Express	E/W	SGV	3 & 9	397	10.3	38.5	397	1	N/A	18.9	74.4	6.7
490	490	LA - El Monte - Covina - Diamond Bar - Brea Express	E/W	SGV	9	4,363	149.4	29.2	336	13	100.00%	21.7	58.5	19.8
550	550	San Pedro / W. Hollywood Express	N/S	SB	7, 10, & 18	2,963	120.1	24.7	296	10	N/A	15.1	48.3	36.7
576	576	S. Los Angeles - Pacific Palisades Express	E/W	G	1	633	22.0	28.8	211	3	N/A	24.9	53.1	22.0
603	603	Rampart Bl. - Hoover St. - Colorado St. - Grand Vista Ave. - LA County/USC Medical Center Shuttle	N/S	G	94	3,468	120.2	28.9	385	9	N/A	N/A	N/A	N/A
605	605	County/USC Medical Center Shuttle	N/S	G	94	2,480	39.9	62.2	620	4	N/A	N/A	N/A	N/A
608	608	Crenshaw Connection	N/S	G	93	249	11.9	20.9	249	1	N/A	N/A	N/A	N/A
611	611	Huntington Park Shuttle	Clockwise	G	1 & 2	2,462	83.4	29.5	308	8	N/A	12.1	51.9	36.1
612	612	South Gate Shuttle	Clockwise	G	2	2,175	86.1	25.3	242	9	N/A	17.3	58.8	23.9
620	620	Boyle Heights Shuttle	N/S	SGV	3	1,569	40.2	39.0	523	3	100.00%	9.6	76.8	13.6
625	625-626	Aviation Metro Green Line Station Shuttle	E/W	G	93	294	37.8	7.8	59	5	N/A	N/A	N/A	N/A
652	652	West Los Angeles - Hollywood Bowl	WC	7	230	Varies	Varies	N/A	N/A	Varies	N/A	N/A	N/A	N/A
653	651-653	Sherman Oaks-Hollywood Bowl / Canoga Park-Hollywood Bowl	SFV	8 & 15	230	Varies	Varies	N/A	N/A	Varies	N/A	14.3	71.4	14.3

METRO WEEKDAY BUS SYSTEM DATA  
DIRECTLY OPERATED EFFECTIVE 2-1-04  
CONTRACT SERVICES 12-21-03

APPENDIX 4

Parent Lines	Route(s)	Route Description	Direction	Current Sector	Current Division	Boardings	Revenue Hours	Boardings Per Hour	Boardings Per Peak Vehicle	Sched Peak Vehicles	Weekday Load factor compliance @ 1-20	On-time Performance								
												Early %	On Time %	Late %						
657	657	Torrance-Hollywood Bowl	SFV	8 & 15	293	Varies	N/A	N/A	N/A	Varies	N/A	0.0	55.6	44.4						
681	681	Huntington Park - Watts Shuttle	N/S	SB	1,960	46.9	41.8	490	4	4	N/A	7.7	64.3	28.0						
686	686	Arroyo Parkway/Colorado Avenue/Allen Avenue	N/S	SGV	1,274	46.3	27.5	255	5	5	N/A	N/A	N/A	N/A						
687	687	Los Robles Shuttle	N/S	SGV	1,694	53.4	31.7	424	4	4	N/A	5.1	70.9	24.0						
710	710	Crenshaw	N/S	SB	N/A	150.9	N/A	N/A	18	18	N/A	N/A	N/A	N/A						
711	711	Florence & Garfield to Inglewood Transit Center	E/W	SB	7,094	123.9	57.3	591	12	12	98.54%	N/A	N/A	N/A						
720	720	Wilshire Bl & Whittier Bl between Santa Monica and Commerce	E/W	WC	43,482	771.6	56.4	518	84	84	89.65%	N/A	N/A	N/A						
745	745	South Broadway between Downtown Los Angeles and Metro Green (D) Line	N/S	G	7,522	152.0	49.5	396	19	19	95.01%	N/A	N/A	N/A						
750	750	Ventura Bl between Universal City and Warner Center	E/W	SFV	9,865	208.7	47.3	395	25	25	96.31%	N/A	N/A	N/A						
754	754	Vermont Avenue between Hollywood and Metro Green (D) Line	N/S	SB	25,840	307.9	83.9	783	33	33	90.20%	N/A	N/A	N/A						
761	761	Van Nuys Bl. between Westwood to Pacoima	N/S	SFV	7,452	181.1	41.1	414	18	18	93.91%	N/A	N/A	N/A						
<b>Statistics totals reflect both D.O. and Contract operated services:</b>												<b>1,208,361</b>	<b>22,279</b>	<b>54.2</b>	<b>543</b>	<b>2227</b>	<b>97.15%</b>	<b>14.8</b>	<b>64.4</b>	<b>20.8</b>

- Notes:**
- (1) Equipment requirements for Weekday Line 264 service is combined with Line 487 due to interlining.
  - (2) On-time performance data came from APC Data Collected June 29, 2003 through January 7, 2004.
  - (3) Weekday load factor compliance provided by the Causal Analysis Section using data collected September 28, 2003 through December 27, 2003.
  - (4) Hollywood Bowl is seasonal service and usually operated from June through September.
  - (5) Net peak vehicles are gross peak vehicles less interline savings from the 4-24 Report.
  - (6) Reviewed and approved by all 5 Service Development Managers from all five Service Sectors.

**DIRECTLY OPERATED:**

Daily ridership APC line patronage 06/03.  
Daily revenue service hours and net peak buses taken from 4-24 Report effective 02/01/04.

**CONTRACT OPERATED:**

Daily ridership provided by the Contract Services Department using January 2004 data.  
Daily revenue service hours and gross peak buses taken from 4-24 Report effective 12/21/03.







**METRO WEEKDAY BUS SYSTEM DATA BY SECTOR AND CONTRACT SERVICES  
DIRECTLY OPERATED EFFECTIVE 2-1-04  
CONTRACT SERVICES 12-21-03**

**APPENDIX 4**

Metro Bus System Weekday Summary by Service Sector and Contract Services									
Service Sector	Boardings	Revenue Hours	Boardings Per Hour	Boardings Per Peak Vehicle	Scheduled Peak Vehicles	Weekday Load factor compliance @ 1.20	Early %	On Time %	Late %
Gateway	178,413	2,944	60.6	574	311	95.72%	15.3	63.5	21.3
San Fernando Valley	187,112	3,752	49.9	506	370	96.61%	15.8	65.5	18.7
San Gabriel Valley	195,720	3,952	49.5	559	350	99.12%	11.7	66.8	21.5
South Bay	314,162	5,183	60.6	617	509	97.25%	16.5	62.7	20.8
Westside Central	301,679	5,188	58.1	553	546	97.49%	14.4	63.1	22.5
Contract Services	31,275	1,441	21.7	222	141	95.84%	N/A	N/A	N/A
<b>Metro System Total:</b>	<b>1,208,361</b>	<b>22,279</b>	<b>54.2</b>	<b>543</b>	<b>2227</b>	<b>97.15%</b>	<b>14.8</b>	<b>64.4</b>	<b>20.8</b>

Parent Lines	Route(s)	Route Description	Direction	Current Sector	Current Division	Boardings	Revenue Hours	Boardings Per Hour	Boardings Per Peak Vehicle	Scheduled Peak Vehicles	Weekday Load factor compliance @ 1.20	On-time Performance		
												Early %	On Time %	Late %
2	2 & 302	Sunset Blvd. - Beverly Dr.	E/W	WC	7 & 10	23,766	466.0	51.0	553	43	97.67%	17.9	60.7	21.3
4	4-304	Santa Monica Blvd.	E/W	WC	6, 7, & 10	34,378	609.6	56.4	537	64	99.04%	15.5	61.5	23.0
10	10-11-48	Meirose Ave. - Virgil Ave. - Temple St. - San Pedro	E/W	WC	2 & 7	16,205	293.7	55.2	523	31	99.06%	14.0	67.1	18.9
14	14-37	Beverly Blvd. - W. Adams	E/W	WC	7	22,925	368.1	62.3	573	40	97.40%	19.5	66.5	14.0
16	16-316	W. 3rd St.	E/W	WC	1, 2, 7, & 10	26,497	399.1	66.4	564	47	96.33%	12.6	62.4	25.0
18	18	W. 6th St. - Whittier Blvd.	E/W	G	1 & 2	24,261	307.2	79.0	899	27	95.99%	14.1	69.4	16.5
20	20-21	Wilshire Blvd. - UCLA - Santa Monica	E/W	WC	6 & 10	21,531	401.6	53.6	478	45	99.49%	13.1	59.9	27.0
26	26-51-52-352	7th St. - Virgil Ave. - Franklin Ave. - Avalon Blvd. - W Olympic Blvd. / Pasadena Ave. - York Blvd. / Cypress Av - Eagle Rock Blvd. / Verdugo Rd. - Glendale College	N/S	G	1 & 2	26,141	400.1	65.3	608	43	98.27%	14.3	69.1	16.6
28	28-328 83-84-85	W Pico Blvd. - E. 1st St. - Floral Dr.	E/W	SGV	3 & 9	37,006	591.8	62.5	661	56	99.38%	11.8	66.7	21.5
30	30-31	Venice Blvd.	E/W	WC	7 & 10	32,278	415.7	77.6	807	40	96.12%	11.8	74.3	13.9
33	33-333	W. Jefferson Blvd. / City Terrace	E/W	WC	6 & 10	25,488	502.8	50.7	490	52	97.05%	13.8	61.1	25.2
38	38-71	Hawthorne Blvd - LAX - LA Union Station	N/S	SB	10 & 18	27,088	427.9	63.3	576	47	98.50%	14.3	58.4	27.3
42	42	LA Union Station / M.L. King Jr. Bl / LAX City Bus Center	N/S	SB	5, 10, & 18	4,540	104.9	43.3	349	13	100.00%	15.0	60.0	25.1
45	45-46	Broadway - Mercury Ave.	E/W	G	1 & 2	19,485	265.7	73.3	779	25	93.96%	11.0	67.8	21.1
53	53	Central Ave.	N/S	SB	18	15,981	221.6	72.1	666	24	98.70%	15.8	67.6	16.5
55	55	LA - Compton Ave. - Imperial Station	N/S	SB	1, 2, & 18	12,592	212.4	59.3	484	26	88.33%	13.8	65.4	20.8
58	58	Washington Station - Long Beach Blvd. - Santa Fe Ave.	N/S	G	97	262	38.3	6.8	66	4	N/A	N/A	N/A	N/A
60	60-360	Washington Blvd. - Indiana St. - Gege Ave.	N/S	G	1, 2, & 18	26,542	467.2	56.8	603	44	95.06%	10.7	56.9	32.4
65	65	Washington Blvd. - Indiana St. - Gege Ave.	E/W	G	1 & 2	2,580	63.5	40.6	369	7	N/A	14.0	70.5	15.5



**METRO WEEKDAY BUS SYSTEM DATA  
DIRECTLY OPERATED EFFECTIVE 2-1-04  
CONTRACT SERVICES 12-21-03**

**APPENDIX 4**

Parent Lines	Route(s)	Route Description	Direction	Current Sector	Current Division	Boardings	Revenue Hours	Boardings Per Hour	Boardings Per Peak Vehicle	Scheduled Peak Vehicles	Weekday Load factor compliance @ 1-20	On-time Performance		
												Early %	On Time %	Late %
66	66-366	E. Olympic Blvd. -W 8th St.	E/W	G	1 & 2	27,096	362.9	74.7	521	52	89.36%	12.3	74.0	13.6
68	68	W. Washington Blvd. - Chavez Ave.	E/W	WC	7 & 10	24,231	335.0	72.3	713	34	97.74%	13.9	67.0	19.1
70	70-370	LA - El Monte via Garvey Ave.	E/W	SGV	3 & 9	15,620	279.6	55.9	744	21	99.14%	10.6	71.9	17.4
76	76	LA - El Monte via Valley Blvd.	E/W	SGV	9	10,849	214.1	50.7	638	17	100.00%	11.1	74.0	14.9
78	78-79	LA - Alhambra - South Arcadia via Las Tunas Dr & via Huntington Dr.	E/W	SGV	3 & 9	11,350	261.5	43.4	454	25	96.52%	15.1	71.7	13.2
81	81-381	Figueroa St	N/S	SGV	3 & 18	21,985	372.1	58.8	644	34	99.08%	12.2	70.9	16.9
90	90-91	LA - Sunland-Sylmar via Pennsylvania Ave. & via La Crescenta Ave.	N/S	SFV	15	6,171	168.0	36.7	411	15	97.97%	14.4	69.6	16.0
92	92	LA - Glendale - Burbank - San Fernando - Glendale Blvd.	N/S	SFV	15	9,766	227.1	43.0	543	18	98.67%	23.7	61.2	15.1
94	94-394	LA - San Fernando	N/S	SFV	15	16,030	375.6	42.7	445	36	97.63%	16.4	63.7	19.9
96	96	LA-Riverside Dr - E Jefferson Blvd.	ES/WN	G	95 & 96	2,719	122.8	22.1	247	11	N/A	N/A	N/A	N/A
102	102	Coliseum St.	E/W	G	2	971	34.8	27.9	243	4	N/A	18.3	64.8	16.8
105	105	Vernon Ave. - La Cienega Blvd.	E/W	G	1, 2, & 7	18,005	268.7	67.0	720	25	95.13%	14.3	63.0	22.7
107	107	54th St. - Fairview Blvd. - Santa Ana St.	E/W	SB	5	1,306	50.0	26.1	435	3	N/A	18.8	69.7	11.5
108	108	Slauson Ave.	E/W	SB	5 & 18	16,960	263.4	64.4	606	28	98.05%	19.4	57.6	23.0
110	110	Gage Ave - Centinela Ave - Fox Hills Mall	E/W	SB	5	10,976	200.2	54.8	523	21	97.11%	18.1	61.3	20.5
111	111	LAX - Florence Ave - Leffingwell Rd.	E/W	SB	5 & 18	16,236	225.5	72.0	902	18	97.74%	17.0	57.6	25.4
115	115-315	LAX-Manchester Ave. - Firestone Blvd.	E/W	SB	5 & 18	17,449	260.4	67.0	646	27	97.93%	21.9	58.5	19.6
117	117	LAX-Century Blvd. - Tweedy Blvd. - Rancho Los Amigos	E/W	SB	5 & 18	10,462	167.7	62.4	872	12	N/A	17.4	62.9	19.8

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DIRECTLY OPERATED EFFECTIVE 2-1-04  
CONTRACT SERVICES 12-21-03**

**APPENDIX 4**

Parent Lines	Route(s)	Route Description	Direction	Current Sector	Current Division	Boardings	Revenue Hours	Boardings Per Hour	Boardings Per Peak Vehicle	Scheduled Peak Vehicles	Weekday Load factor compliance @ 1.20	On-time Performance		
												Early %	On Time %	Late %
119	119-126	108th St. / Yukon Ave. - Manhattan Beach Blvd	E/W	SB	5 & 18	937	29	32.3	312	3	N/A	18.3	68.7	13.0
120	120-121	LAX - Imperial Hwy. - Norwalk Metrolink	E/W	SB	18	6,206	120.8	51.4	621	10	100.00%	11.1	63.5	25.4
124	124	El Segunido Blvd. - Santa Fe Av.	E/W	SB	18	1,558	33.8	46.1	519	3	N/A	23.0	68.3	8.7
125	125	Rosecrans Blvd	E/W	G	91	3,779	134.5	28.1	252	15	85.92%	N/A	N/A	N/A
127	127	Compton Blvd. - Bellflower Blvd.	E/W	SB	18	939	29.2	32.2	470	2	N/A	9.8	67.1	23.1
128	128	MLK Jr. Transit Center - La Mirada	E/W	G	91	878	42.0	20.9	220	4	N/A	N/A	N/A	N/A
130	130	Artesia Blvd	E/W	G	91	1,608	98.7	16.3	146	11	92.98%	N/A	N/A	N/A
150	150-240	Canoga Park - Ventura Blvd. / Reseda Blvd. - Ventura Boulevard to University City	E/W	SFV	18	13,894	313.6	44.3	515	27	100.00%	11.0	74.8	14.2
152	152	Fallbrook Ave. - Roscoe Blvd. - Vineland Ave. - Burbank	E/W	SFV	8 & 15	11,423	219.3	52.1	544	21	95.02%	12.2	69.7	18.2
154	154	Tampa Ave. - Ventura Blvd. - Burbank Blvd - Oxnard St.	E/W	SFV	8 & 15	2,557	69.7	36.7	320	8	N/A	23.9	60.4	15.7
156	156	Panorama City / Van Nuys / N. Hollywood / Los Angeles City College	E/W	SFV	8 & 15	17,288	249.2	69.4	823	21	99.33%	17.7	55.5	26.8
158	158	Devonshire St. - Woodman Ave.	E/W	SFV	8 & 15	2,258	56.1	40.2	376	6	100.00%	14.1	70.5	15.3
161	161	Thousand Oaks Transit Center - Westlake - Canoga Park	E/W	SFV	8	1,513	61.6	24.6	168	9	100.00%	15.9	75.8	8.2
163	163	Sherman Way - Hollywood Blvd.	E/W	SFV	8 & 15	12,593	214.2	58.8	630	20	100.00%	19.9	62.9	17.2
165	164-165	Vanowen St. / Victory Blvd.	E/W	SFV	8 & 15	19,252	346.3	55.6	550	35	94.04%	21.0	63.8	15.2
166	166	Nordhoff St. - Lankershim Blvd.	E/W	SFV	8 & 15	12,657	213.8	59.2	452	28	87.18%	13.5	63.9	22.6
167	167	Plummer St. - Coldwater Canyon Av. - Chatsworth Transportation Center	ES/WN	G	95	1,937	83.2	23.3	194	10	98.61%	N/A	N/A	N/A
168	168	Lassen St. - Paxton St.	E/W	SFV	8	815	27.4	29.7	408	2	N/A	11.1	68.1	20.8
169	169	Saticoy St. - Sunland Blvd.	E/W	SFV	8 & 15	2,893	61.1	47.3	482	6	94.36%	29.9	49.3	20.7

METRO WEEKDAY BUS SYSTEM DATA  
DIRECTLY OPERATED EFFECTIVE 2-1-04  
CONTRACT SERVICES 12-21-03

Parent Lines	Route(s)	Route Description	Direction	Current Sector	Current Division	Boardings	Revenue Hours	Boardings Per. Hour	Boardings Per. Peak Vehicle	Scheduled Peak Vehicles	Weekday Load factor compliance @ 1.20	On-time Performance		
												Early %	On Time %	Late %
170	170	CSULA-Hellman Ave. - El Monte via South El Monte	E/W	SGV	9	1,280	57.2	22.4	320	4	N/A	16.3	62.4	21.3
175	175	Fountain Ave. - Tainmadge St. - Hyperion Ave.	E/W	SGV	3	1,461	28.0	52.2	365	4	97.36%	9.2	49.5	41.3
176	176	Glassell Park - Highland Park - Alhambra - El Monte	E/W	SGV	3 & 9	1,802	44.7	40.3	601	3	N/A	N/A	N/A	N/A
177	177	Glendale-JPL-Pasadena-Arcadia-Monrovia-Duarte	E/W	G	91	241	27.2	8.9	121	2	N/A	N/A	N/A	N/A
180	180-181-380	Hollywood - Glendale - Pasadena - N. Lake via Colorado Blvd. & PCC via Yosemite Dr.	E/W	SGV	3 & 9	19,280	334.8	57.6	714	27	N/A	9.7	61.3	29.0
200	200	Alvarado St. - Echo Park Ave.	N/S	G	1 & 2	14,235	180.7	78.8	837	17	98.72%	18.3	76.9	4.8
201	201	Silverlake Blvd.	N/S	SGV	3	1,456	45.9	31.7	291	5	N/A	0.0	78.8	21.2
202	202	Willowbrook - Compton - Wilmington	N/S	SB	18	1,506	61.4	24.5	377	4	N/A	7.5	82.8	9.7
204	204	Vermont Ave.	N/S	SB	5 & 18	27,173	276.9	98.1	1,235	22	95.61%	21.3	62.3	16.4
205	205	Wilmington Blvd - S Western Av	N/S	G	91	2,259	122.7	18.4	188	12	98.01%	N/A	N/A	N/A
206	206	Normandie Ave.	N/S	SB	3, 5, & 18	15,844	215.1	73.7	689	23	94.21%	19.5	67.0	13.5
207	207-357	Western Ave. - 120th St. Van Ness Ave. - Arlington Ave.	N/S	SB	5 & 18	36,828	407.8	90.3	944	39	98.39%	16.2	68.0	15.8
209	209	Vine St. - Crenshaw Blvd.	N/S	SB	5	1,403	49.3	28.5	281	5	N/A	19.1	72.3	8.5
210	210-310	Prairie Ave. / Inglewood Ave. - Redondo Beach - Del Amo Center	N/S	SB	18	21,263	201.8	105.4	1,418	15	99.60%	13.0	60.0	26.9
211	211-215	La Brea Ave.	N/S	SB	18	1,664	55.1	30.2	208	8	100.00%	16.2	51.6	32.2
212	212	Artesian Transit center	N/S	SB	5 & 18	12,502	206.2	60.6	544	23	96.10%	18.3	59.3	22.4
214	214	Shuttle	N/S	G	96	245	27.5	8.9	61	4	N/A	N/A	N/A	N/A
217	217	Hollywood Blvd. - Fairfax Ave.	N/S	WC	7	17,171	257.8	66.6	687	25	99.37%	16.2	66.1	17.8

METRO WEEKDAY BUS SYSTEM DATA  
DIRECTLY OPERATED EFFECTIVE 2-1-04  
CONTRACT SERVICES 12-21-03

APPENDIX 4

Parent Lines	Route(s)	Route Description	Direction	Current Sector	Current Division	Boardings	Revenue Hours	Boardings Per Hour	Boardings Per Peak Vehicle	Scheduled Peak Vehicles	Weekday Load factor compliance @ 1,20	On-time Performance		
												Early %	On Time %	Late %
218	218	Cedar Sinai Medical Center - Studio City - Laurel Canyon Blvd.	N/S	G	94	1,309	54.7	23.9	218	6	N/A	N/A	N/A	N/A
220	220	Robertson Blvd. - Culver Blvd. - LAX	N/S	WC	7	897	42.7	21.0	299	3	N/A	10.7	60.9	28.4
225	225-226	LAX-Aviation Blvd-Prospect Av-Palos Verdes Dr East/LAX-Aviation Blvd-Prospect Av-Palos Verdes Dr South	N/S	G	91	103	17.7	5.8	34	3	100.00%	N/A	N/A	N/A
230	230-239	White Oak Ave. - Zeizah Ave. - Rinaldi St.	N/S	SFV	15	5,926	123.9	47.8	539	11	98.66%	13.1	68.8	18.1
232	232	Pacific Coast Hwy	N/S	G	91	3,916	169.5	23.1	230	17	95.38%	N/A	N/A	N/A
233	233	Lakeview Terrace/Van Nuys Blvd./Sherman Oaks Blvd. - Sayre St. / Sepulveda Blvd. - Brand	N/S	SFV	15	10,101	135.6	74.5	1,122	9	90.15%	23.9	59.4	16.7
234	234-183	Magnolia Blvd. - Kenneth Rd. - E. Colorado St.	N/S	SFV	15	13,319	241.1	55.2	579	23	97.02%	15.4	70.4	14.1
236	236-237	Balboa Blvd. - Glenoaks Blvd. - Sylmar / Rinaldi St. - Woodley Ave. - Van Nuys De Soto Ave. - Ventura	N/S	SFV	8	2,434	68.2	35.7	348	7	95.83%	8.8	69.4	21.8
243	243	Porter Ranch Blvd. - Winnetka Ave. - Topanga Cyn. Blvd. - Mulholland Dr. - Valley Circle Blvd.	E/W	SFV	8	3,421	74.0	46.2	380	9	98.57%	14.9	75.2	9.9
245	245	Soto St./Ave. 26/California Ave.	N/S	SFV	8	1,981	49.5	40.0	396	5	N/A	8.7	82.6	8.7
251	251-350	Soto St./Huntington Dr.	N/S	SGV	3 & 18	21,045	319.4	65.9	779	27	100.00%	9.9	66.0	24.1
252	252	Imperial-Wilmington Sta-Gage Av-Lorena St	N/S	SGV	3 & 18	2,204	38.7	57.0	735	3	N/A	10.6	75.6	13.7
254	254	Griffin Ave. - County Hospital - Rowan Ave.	N/S	G	91	537	49.6	10.8	134	4	N/A	N/A	N/A	N/A
255	255	Hospital - Rowan Ave.	N/S	SGV	3	2,194	31.3	70.1	1,097	2	N/A	0.0	50.0	50.0

**METRO WEEKDAY BUS SYSTEM DATA  
DIRECTLY OPERATED EFFECTIVE 2-1-04  
CONTRACT SERVICES 12-21-03**

**APPENDIX 4**

Parent Lines	Route(s)	Route Description	Direction	Current Sector	Current Division	Boardings	Revenue Hours	Boardings Per Hour	Boardings Per Peak Vehicle	Scheduled Peak Vehicles	Weekday Load factor compliance @ 1.20	On-time Performance			
												Early %	On Time %	Late %	
256	256	Eastern AV-CSULA-Avenue 64-North Hill Av	N/S	G	98	948	81.9	11.6	158	6	N/A	N/A	N/A	N/A	
259	258-259	Eastern Ave. - Arizona Ave. - Emery Park / Arizona Ave. - Alhambra Artesia Station - Pasadena - Altadena Via Atlantic Blvd.	N/S	SGV	9	2,000	65.4	30.6	400	5	N/A		11.9	71.9	16.2
260	260-361	Altadena Via Atlantic Blvd.	N/S	SGV	3, 9, & 18	17,903	316.9	56.5	597	30	98.46%		10.2	67.8	22.0
264	264	Duarte Rd. - Altadena Dr.	N/S	SGV	9	768	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A
265	265-275	Paramount Blvd. - Pico Rivera - Whittier - Cerritos Lakewood Blvd-Rosemead Blvd	N/S	SB	18	1,647	62.7	26.3	329	5	N/A		17.7	56.5	25.8
266	266	Temple City Blvd. - Del Mar Blvd. - Lincoln Ave.	N/S	G	91	2,709	88.9	30.5	387	7	100.00%		N/A	N/A	N/A
267	267	Washington Blvd. - Peck Rd-Pioneer Blvd-Studebaker Rd	N/S	SGV	3 & 9	2,558	114.1	22.4	284	9	N/A		12.4	70.0	17.6
268	268	UCLA-W. Hollywood - Rosa Parks (Imperial / Wilmington) Station	N/S	SGV	9	2,469	73.0	33.8	274	9	100.00%		21.1	63.4	15.5
270	270	LA - Santa Fe Springs - Norwalk - Hawaiian Gardens	N/S	G	91	1,334	71.5	18.7	222	6	N/A		N/A	N/A	N/A
305	305	Canoga Park - Roscoe Blvd. - Northridge - North Hollywood	N/S	SB	7 & 18	4,132	136.4	30.3	376	11	N/A		21.3	52.7	26.0
362	362	Canoga Park - Sherman Way - Victory Blvd. - North Hollywood	E/W	G	1	3,458	100.9	34.3	346	10	N/A		16.4	66.4	17.2
418	418	LA - Santa Monica - Malibu - Trancas Express	E/W	SFV	8	1,303	34.1	38.2	217	6	N/A		20.5	56.0	23.5
426	426	LA - LAX - Redondo Beach Express	E/W	SFV	8	1,677	33.0	50.8	335	5	N/A		13.3	55.0	31.7
434	434	LA - W. Torrance - Rolling Hills - Rancho Palos Verdes Express	E/W	WC	6 & 10	2,954	130.3	22.7	148	20	99.06%		17.1	46.8	36.2
439	439		N/S	SB	18	1,811	108.7	16.7	226	8	N/A		11.9	62.1	25.9
444	444		N/S	SB	18	2,320	100.7	23.0	155	15	99.45%		19.6	55.6	24.9

Parent Lines	Route(s)	Route Description	Direction	Current Sector	Current Division	Boardings	Revenue Hours	Boardings Per. Hour	Boardings Per Peak Vehicle	Scheduled Peak Vehicles	Weekday Load factor compliance @ 1.20	On-time Performance		
												Early %	On Time %	Late %
445	445	LA - Alpine Village - San Pedro Express	N/S	SB	18	877	49.3	17.8	219	4	N/A	18.2	75.8	6.1
446	446-447	LA - Carson - Wilmington - San Pedro Express & Wilmington - San Pedro - 7th St. Express	N/S	SB	10 & 18	4,105	154.8	26.5	316	13	99.27%	16.5	56.4	27.1
460	460	LA - Norwalk - Disneyland Express	E/W	G	1 & 2	2,847	148.7	19.1	158	18	100.00%	15.5	46.3	38.2
484	484	LA - El Monte - La Puente - Pomona	E/W	SGV	9	6,636	220.3	30.1	349	19	99.68%	13.5	60.0	26.5
485	485	LA - Altadena via Fair Oaks Ave. Express & Altadena via Lake Ave. Express	N/S	SGV	3 & 9	3,581	117.8	30.4	358	10	N/A	13.3	61.3	25.4
487	487-491	LA - San Gabriel - Sierra Madre Express & Santa Anita Ave. Express	E/W	SGV	3 & 9	3,076	126.1	24.4	220	14	98.95%	14.9	62.1	23.1
489	489	LA - Hastings Ranch Express	E/W	SGV	3 & 9	397	10.3	38.5	397	1	N/A	18.9	74.4	6.7
490	490	LA - El Monte - Covina - Diamond Bar - Brea Express	E/W	SGV	9	4,363	149.4	29.2	336	13	100.00%	21.7	58.5	19.8
550	550	San Pedro / W. Hollywood Express	N/S	SB	7, 10, & 18	2,963	120.1	24.7	296	10	N/A	15.1	48.3	36.7
576	576	S. Los Angeles - Pacific Palisades Express	E/W	G	1	633	22.0	28.8	211	3	N/A	24.9	53.1	22.0
603	603	Rampart Bl. - Hoover St. - Colorado St. - Grand Vista Ave. - LA County/USC Medical Center Shuttle	N/S	G	94	3,468	120.2	28.9	385	9	N/A	N/A	N/A	N/A
605	605	County Shuttle	N/S	G	94	2,480	39.9	62.2	620	4	N/A	N/A	N/A	N/A
608	608	Crenshaw Connection	N/S	G	93	249	11.9	20.9	249	1	N/A	N/A	N/A	N/A
611	611	Huntington Park Shuttle	Clockwise	G	1 & 2	2,462	83.4	29.5	308	8	N/A	12.1	51.9	36.1
612	612	South Gate Shuttle	Clockwise	G	2	2,175	86.1	25.3	242	9	N/A	17.3	58.8	23.9
620	620	Boyle Heights Shuttle	N/S	SGV	3	1,569	40.2	39.0	523	3	100.00%	9.6	76.8	13.6
625	625-626	Aviation Metro Green Line Station Shuttle	E/W	G	93	294	37.8	7.8	59	5	N/A	N/A	N/A	N/A
652	652	West Los Angeles - Hollywood Bowl	WC	7	230	Varies	Varies	N/A	N/A	Varies	N/A	N/A	N/A	N/A
653	651-653	Sherman Oaks-Hollywood Bowl / Canoga Park-Hollywood Bowl	SFV	8 & 15	230	Varies	Varies	N/A	N/A	Varies	N/A	14.3	71.4	14.3

**METRO WEEKDAY BUS SYSTEM DATA  
DIRECTLY OPERATED EFFECTIVE 2-1-04  
CONTRACT SERVICES 12-21-03**

**APPENDIX 4**

Parent Lines	Route(s)	Route Description	Direction	Current Sector	Current Division	Boardings	Revenue Hours	Boardings Per Hour	Boardings Per Peak Vehicle	Scheduled Peak Vehicles	Weekday Load factor compliance @ 1.20	On-time Performance								
												Early %	On Time %	Late %						
657	657	Torrance-Hollywood Bowl	SFV	8 & 15	293	Varies	N/A	N/A	N/A	Varies	N/A	0.0	55.6	44.4						
681	681	Huntington Park - Watts Shuttle	N/S	18	1,960	46.9	41.8	490	4	4	N/A	7.7	64.3	28.0						
686	686	Arroyo Parkway/Colorado Avenue/Allen Avenue	N/S	3	1,274	46.3	27.5	255	5	5	N/A	N/A	N/A	N/A						
687	687	Los Robles Shuttle	N/S	9	1,694	53.4	31.7	424	4	4	N/A	5.1	70.9	24.0						
710	710	Crenshaw	N/S	18	N/A	150.9	N/A	N/A	18	18	N/A	N/A	N/A	N/A						
711	711	Florence & Garfield to Inglewood Transit Center	E/W	5	7,094	123.9	57.3	591	12	12	98.54%	N/A	N/A	N/A						
720	720	Wilshire Bl & Whittier Bl between Santa Monica and Commerce	E/W	1, 7, & 10	43,482	771.6	56.4	518	84	84	89.65%	N/A	N/A	N/A						
745	745	South Broadway between Downtown Los Angeles and Metro Green (D) Line	N/S	1	7,522	152.0	49.5	396	19	19	95.01%	N/A	N/A	N/A						
750	750	Ventura Bl between Universal City and Warner Center	E/W	SFV	8 & 15	9,865	208.7	47.3	395	25	96.31%	N/A	N/A	N/A						
754	754	Vermont Avenue between Hollywood and Metro Green (D) Line	N/S	5	25,840	307.9	83.9	783	33	33	90.20%	N/A	N/A	N/A						
761	761	Van Nuys Bl. between Westwood to Pacoima	N/S	SFV	15	7,452	181.1	41.1	414	18	93.91%	N/A	N/A	N/A						
<b>Statistics totals reflect both D.O. and Contract operated services:</b>												<b>1,208,361</b>	<b>22,279</b>	<b>54.2</b>	<b>543</b>	<b>2,227</b>	<b>97.15%</b>	<b>14.8</b>	<b>64.4</b>	<b>20.8</b>

- Notes:**
- (1) Equipment requirements for Weekday Line 264 service is combined with Line 487 due to interlining.
  - (2) On-time performance data came from APC Data Collected June 29, 2003 through January 7, 2004.
  - (3) Weekday load factor compliance provided by the Causal Analysis Section using data collected September 28, 2003 through December 27, 2003.
  - (4) Hollywood Bowl is seasonal service and usually operated from June through September.
  - (5) Net peak vehicles are gross peak vehicles less interline savings from the 4-24 Report.
  - (6) Reviewed and approved by all 5 Service Development Managers from all five Service Sectors.

**DIRECTLY OPERATED:**

Daily ridership APC line patronage 06/03.  
Daily revenue service hours and net peak buses taken from 4-24 Report effective 02/01/04.

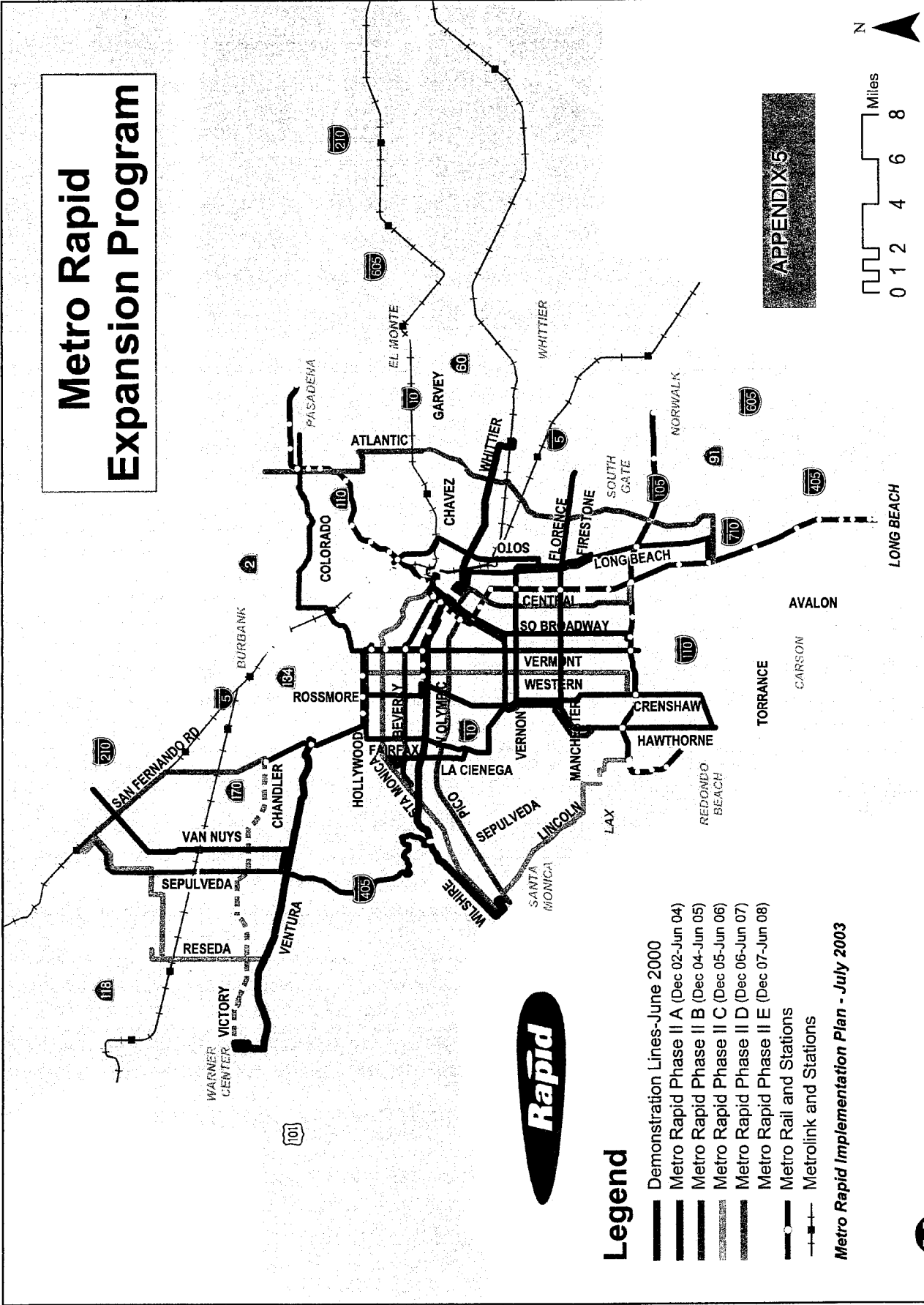
**CONTRACT OPERATED:**

Daily ridership provided by the Contract Services Department using January 2004 data.  
Daily revenue service hours and gross peak buses taken from 4-24 Report effective 12/21/03.





# Metro Rapid Expansion Program



## Legend

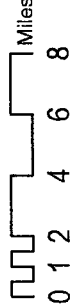
- Demonstration Lines-June 2000
- Metro Rapid Phase II A (Dec 02-Jun 04)
- Metro Rapid Phase II B (Dec 04-Jun 05)
- Metro Rapid Phase II C (Dec 05-Jun 06)
- Metro Rapid Phase II D (Dec 06-Jun 07)
- Metro Rapid Phase II E (Dec 07-Jun 08)
- Metro Rail and Stations
- Metrolink and Stations

Metro Rapid Implementation Plan - July 2003



Metro

## APPENDIX 5





## APPENDIX 6

### JUNE 2003 BUS / RAIL INTERFACE PLANNED CHANGES

Routes	Line Name	Description of Change
58	Alameda St.-San Pedro St.	Minor route change to serve Chinatown Metro Gold Line Station via North Main St., College St and Alameda St.
84/85	Cypress Ave.-Eagle Rock Blvd. & Cypress Ave.-Verdugo Rd.	Retain service along present route along San Fernando Rd. between Figueroa St. and Pasadena Ave. Service to Lincoln Heights/Cypress Park Station would be provided by Line 251 and new limited stop Line 350.
176	Glassell Park-Highland Park- Alhambra El Monte	Restructure line with western terminal established at Ave. 50 and Cypress Ave.
177	La Canada-Flintridge- Monrovia- Pasadena-Duarte	Restructure line to serve Del Mar, Allen and Sierra Madre Villa Metro Gold Line Stations. Reroute line from California Ave. to Del Mar Blvd. between Fair Oaks Ave. and Hill Ave. to serve Del Mar Station. Line to serve Allen Station from Walnut St. and Hill St. via Hill St. and the 210 freeway frontage roads and Allen Ave. to Walnut St. and regular route. Line to serve Sierra Madre Villa Station from existing stops on Foothill Blvd.
181	Hollywood-Glendale-Pasadena- Pasadena City College	Extend route from the present terminal at Pasadena City College to the Sierra Madre Villa Metro Gold Line Station via Colorado Blvd., Rosemead Blvd., Foothill Blvd., and Sierra Madre Villa Station.
188	North Fair Oaks Ave.-Colorado- Blvd.- Duarte Rd.	Cancel line. Line 181 will provide replacement service along Colorado Blvd. on Fair Oaks Blvd. by Line 260, and from the Sierra Madre Villa Station to City of Hope by a rerouted Line 264.
251	Soto St.-Ave. 26	Restructure route south of Florence Ave. via existing route of Line 252 to Long Beach Blvd. Blue Line Station. Existing Line 251 service south of Florence Ave. to 103rd St. Blue Line Station to be provided by new Line 681 Shuttle.
252	Soto St.-Long Beach	Shorten route. Line to operate along Soto St. between Huntington Dr. and Whittier Blvd.
255	Rowan Ave.-Griffin Ave.	Extend route from existing northern terminal at Figueroa St. and Ave. 43 to Heritage Square/The Arroyo Station.
256	Eastern Ave.-Ave. 64- North Hill Ave.	Modify route to serve Historic Highland Park Metro Gold Line Station, Monte Vista St., Ave. 61 and Piedmont Ave. Line to serve Allen Metro Gold Line Station from Hill St. and Walnut St. via Walnut St., Allen Ave. and Orange Grove Blvd. to Walnut St. then regular route.
260	Atlantic Blvd.-Los Robles Ave.	Modify route north of Huntington Dr. via Huntington Dr. and Fair Oaks Ave. to Loma Alta Dr.
264	Altadena Dr.-San Gabriel Blvd.- Montebello Town Center	Modify the route to serve the Sierra Madre Villa Gold Line Station. In addition, Line 264 will be extended to the City of Hope over current route of Line 188. Montebello Transit Line 20 will provide service along most of the route of the present Line 264 to the Montebello Town Center.
266	Lakewood Blvd- Rosemead Blvd.	Restructure line to serve Sierra Madre Villa Metro Gold Line Station.
267	Temple City Blvd.- Del Mar Blvd.- Lincoln Ave.	Modify route to serve Sierra Madre Villa Metro Gold Line Station.
268	El Monte-Baldwin Ave.-Washington Blvd-JPL	Modify route to serve Sierra Madre Villa Gold Line Station.
350	Soto St. Limited	Limited stop service to be provided along the restructured route of Line 252 during weekday peak hours.
361	Atlantic Blvd.-Fair Oaks Ave. Limited	Limited stop service to be provided along the restricted route of Line 260 during weekday peak hours.
401	L.A.-Pasadena-North Allen Express	Cancel line; alternative service available between proposed Del Mar Metro Gold Line Station and Downtown Los Angeles via the Metro Gold Line. Line 401 services will continue until the Gold Line opens in July.
483	L.A.-Altadena via Fair Oaks	Cancel line. The re-routed Line 260 and new limited stop line 361 will provide high frequency replacement service along Fair Oaks Ave. Augmented Line 485 will provide service to California State University- Los Angeles and subway service into downtown L.A.
489	L.A.-Hastings Ranch Exp.	Cancel route segment north of Huntington Dr.
686	Allen Ave.-Raymond Ave. Shuttle	Establish new shuttle route to replace local service operated by Line 401 within Pasadena and Altadena.
687	Los Robles Ave. Shuttle	Establish new shuttle route on Los Robles Ave. between Huntington Dr. and Woodbury Rd.

**METRO GOLD LINE BUS INTERPHASE PLAN: NET CHANGES IN PEAK VEHICLES,  
VEHICLE HOURS AND VEHICLE MILES.**

LINE	LINE BY LINE CHANGES FROM DECEMBER 2002 TO JUNE 2003												ANNUALIZED SERVICE DATA													
	WEEKDAY						SATURDAYS						SUNDAYS						ANNUALIZED SERVICE DATA							
	DLY.	OWL	Net Peak		DAY BASE	TOTAL	VEHICLE HRS	VEHICLE MILES	TOTAL	REV.	VEHICLE HRS	VEHICLE MILES	TOTAL	REV.	VEHICLE HRS	VEHICLE MILES	TOTAL	REV.	VEHICLE HRS	VEHICLE MILES	TOTAL	REV.				
			AM	PM																			VEHICLE HRS	VEHICLE MILES	VEHICLE HRS	VEHICLE MILES
85	3	2	1	2	7	83	76	10	11	124	122	5	5	62	57	2,617	2,626	31,315	29,131	2,626	31,315	29,131	2,626	31,315	29,131	
70	9	1	1	3	20	301	249	0	2	0	25	0	1	0	13	6,120	5,262	76,683	65,456	5,262	76,683	65,456	5,262	76,683	65,456	
76	9	1	3	0	5	54	106	0	3	0	34	15	10	180	119	2,145	3,286	24,149	35,816	3,286	24,149	35,816	3,286	24,149	35,816	
78	9	2	-3	0	21	275	237	0	2	0	27	16	15	234	215	6,283	5,819	83,604	74,271	5,819	83,604	74,271	5,819	83,604	74,271	
81	3	2	-2	0	8	103	121	1	5	6	55	0	4	0	67	2,092	3,093	26,623	37,489	3,093	26,623	37,489	3,093	26,623	37,489	
170	0	0	-1	0	6	109	78	0	0	0	0	0	0	0	0	2,040	1,530	27,818	19,764	1,530	27,818	19,764	1,530	27,818	19,764	
175	9	0	0	0	6	75	0	0	0	0	0	0	0	0	0	1,530	1,785	19,125	0	1,785	19,125	0	1,785	19,125	0	
176	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	510	0	0	0	510	0	0	0	0	0
180	3	0	-1	-1	8	100	68	-1	0	-7	0	3	5	35	52	2,177	1,803	27,113	20,407	1,803	27,113	20,407	1,803	27,113	20,407	
188	9	2	-5	0	-88	-1,051	-857	-73	-69	-841	-719	-44	-42	-530	-467	-28,822	-26,696	-342,460	-282,994	-26,696	-342,460	-282,994	-26,696	-342,460	-282,994	
201	3	1	0	1	-4	-30	-20	0	0	0	0	0	0	0	0	-1,020	-765	-5,100	0	-765	-5,100	0	-765	-5,100	0	
206	3	0	-2	0	0	397	320	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
250	206	0	0	0	35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
253	253	0	0	0	13	157	204	21	26	257	294	44	46	583	545	6,959	9,120	87,192	98,996	9,120	87,192	98,996	9,120	87,192	98,996	
251/350	251	1	-3	-1	-16	-192	-252	-22	-21	-244	-219	-24	-23	-291	-251	-14,941	-15,752	-177,736	-182,972	-15,752	-177,736	-182,972	-15,752	-177,736	-182,972	
255	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	52	765	506	0	765	506	0	765	506	0	
259	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
260	9	3	3	1	43	965	853	34	32	476	410	51	47	693	618	15,793	12,815	311,002	274,620	12,815	311,002	274,620	12,815	311,002	274,620	
264	9	0	0	0	2	26	52	19	19	368	246	-2	-12	-166	-166	1,372	1,342	18,577	16,402	1,342	18,577	16,402	1,342	18,577	16,402	
267	4	1	-1	-1	4	59	90	27	25	338	300	27	25	338	300	3,990	3,990	52,111	55,867	3,990	52,111	55,867	3,990	52,111	55,867	
268	9	2	-2	2	4	59	127	0	0	-4	-1	0	0	3	3	1,004	2,301	14,718	32,436	2,301	14,718	32,436	2,301	14,718	32,436	
401	0	2	3	1	17	242	217	0	0	4	0	0	2	24	24	4,208	4,387	61,728	56,787	4,387	61,728	56,787	4,387	61,728	56,787	
471	9	0	-9	-4	-106	-93	-1,323	-35	-33	-565	-525	-35	-33	-564	-525	-30,847	-27,367	-491,646	-395,174	-27,367	-491,646	-395,174	-27,367	-491,646	-395,174	
485	9	0	-2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
484	3	-7	-3	-4	-28	-396	-389	-28	-26	-381	-353	-27	-26	-367	-342	-10,116	-10,244	-142,202	-137,376	-10,244	-142,202	-137,376	-10,244	-142,202	-137,376	
487	9	2	2	0	-40	-772	-634	-10	-10	-191	-182	-3	-3	-62	-59	-10,894	-9,619	-210,427	-174,489	-9,619	-210,427	-174,489	-9,619	-210,427	-174,489	
489	9	2	-2	1	10	233	253	15	15	228	232	0	1	0	17	3,314	3,648	71,287	77,540	3,648	71,287	77,540	3,648	71,287	77,540	
490	9	-5	-7	0	-23	-442	-236	0	0	0	0	0	0	0	0	-5,865	-3,570	-112,738	-60,141	-3,570	-112,738	-60,141	-3,570	-112,738	-60,141	
620	3	1	0	3	31	347	306	0	3	0	0	0	0	0	0	4,627	-1,374	-43,267	-27,003	-1,374	-43,267	-27,003	-1,374	-43,267	-27,003	
681	3	4	4	2	53	663	588	34	33	425	396	31	30	388	360	7,905	8,415	88,485	78,030	8,415	88,485	78,030	8,415	88,485	78,030	
682	3	3	3	2	40	500	480	25	25	313	300	25	25	313	300	17,081	15,951	213,513	191,412	15,951	213,513	191,412	15,951	213,513	191,412	
686	3	4	5	2	52	650	552	30	30	375	360	30	30	375	360	16,560	15,030	207,000	180,360	15,030	207,000	180,360	15,030	207,000	180,360	
687	9	5	3	69	60	863	720	44	41	550	492	43	41	538	482	22,377	19,810	279,713	237,720	19,810	279,713	237,720	19,810	279,713	237,720	
689	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>TOTAL NET CHANGE:</b>	<b>10</b>	<b>-5</b>	<b>-8</b>	<b>4</b>	<b>145</b>	<b>1,521</b>	<b>1,990</b>	<b>93</b>	<b>111</b>	<b>1,135</b>	<b>1,294</b>	<b>155</b>	<b>148</b>	<b>1,889</b>	<b>1,730</b>	<b>49,488</b>	<b>49,364</b>	<b>457,181</b>	<b>582,406</b>	<b>49,488</b>	<b>457,181</b>	<b>582,406</b>	<b>49,488</b>	<b>457,181</b>	<b>582,406</b>	

LINE	WEEKDAY		SATURDAYS		SUNDAYS		ANNUALIZED SERVICE DATA	
	DLY.	OWL	VEHICLE HRS	VEHICLE MILES	VEHICLE HRS	VEHICLE MILES	VEHICLE HRS	VEHICLE MILES
58	0	0	0	0	0	0	0	0
177	0	0	1	0	0	0	0	0
256	0	1	1	2	6	8	10	258
266	0	0	0	0	0	0	0	0
<b>TOTAL NET CHANGE:</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>29</b>	<b>32</b>	<b>29</b>	<b>258</b>

SOURCE: SAN GABRIEL VALLEY SERVICE SECTOR

APPENDIX 6

METRO SERVICE CHANGES RELATIVE TO EACH GOLD LINE STATION

STATION	EXISTING METRO LINES	FREQUENCY OF SERVICE IN MINUTES					PROPOSED METRO LINE CHANGES	FREQUENCY OF SERVICE IN MINUTES				
		AM east or north west or south	Base	PM east or north west or south	Sat	Sun		AM east or north west or south	Base	PM east or north west or south	Sat	Sun
Chinatown	58	24	24	24	45	45	58	25	25	25	45	45
	76	13/10	15	11/13	15	20	76	13/10	15	11/13	15	20
Av. 26	251	see table listing below					251	SEE TABLE FOR 251-350 BELOW				
	84	14-18/8-20	32	12-16/18-23	16	18	84	15/10	30	12/20	15	15
	85	8-15/5-18	32	12-20/20-24	n/s	n/s	85	10/7.5	30	12/21	n/s	n/s
French Av.	81-381	6/5	10	5/6	11	12	81-381	5/6	10	5/6	10	12
	83	8-12/5-10	16	10/9-11	16	18	83	10/6	15	10/10	15	15
	255	see below					255	30	30	30	30	30
Southwest Mus.	81-381	6/5	10	5/6	11	12	81-381	5/6	10	5/6	10	12
	83	8-12/5-10	16	10/9-11	16	18	83	10/6	15	10/10	15	15
Av. 57	81-381	6/5	10	5/6	11	12	81-381	5/6	10	5/6	10	12
	83	8-12/5-10	16	10/9-11	16	18	83	10/6	15	10/10	15	15
	176	60	60	60	-	-	176	60	60	60	-	-
	256	30/35	45	45	60	60	256	30	45	30	60	60
Mission St.	176	60	60	60	-	-	176	60	60	60	-	-
Fillmore	401	15/12	40	10-14/20	60	60	260	SEE TABLE FOR 260-361 BELOW				
	483	30/22-30	40	33-40/40	40	40	361	SEE TABLE FOR 260-361 BELOW				
	485	30/20-24	39	34-40/39	40	40	686	15+	30	15*	30	30
	485	30/20-25	40	34-40/40	40	40	+ Plus additional trippers to/from Blair HS					
Del Mar	177	30-50	60	60	-	-	177	50	60	50	-	-
	256	30/35	45	45	60	60	256	30	45	30	60	60
	401	15/12	40	10-14/20	60	60	686	15+	30	15*	60	60
	483	30/22-29	40	33-40/39	40	40	260	SEE TABLE FOR 260-361 BELOW				
							361	SEE TABLE FOR 260-361 BELOW				
Memorial Park	267	20-30-60 / 35	20-60	30-45 / 30-40	60	60	260	SEE TABLE FOR 260-361 BELOW				
							361	SEE TABLE FOR 260-361 BELOW				
							267	15-30/15-30	30	30/30	30	30
						687	15	30	15	30	30	
Lake Av.	180	16-21/17-20	22	18-20/15-20	10-10-20	11-11-22	180-380	15-15/15-15	15	15-15/15-15	15	15
	181	14-19/17-20	22	17-22/18-20	30	33	181	15/15	15	15/15	30	30
	485	30/20-25	40	34-40/40	40	40	485	20/20	30	20/20	30	30
Allen Av.	401	15/12	40	10-14/20	60	60	686	15	30	15	60	60
	256	30/35	45	45	60	60	256	30	30	30	60	60
	177	30-50	60	60	-	-	177	30	30	30	-	-
Sierra Madre Villa	177	30-50	60	60	-	-	177	30	30	30	-	-
	188	25/30	30-60	30-60/20-60	30-60	60	181	30	30	30	30	60
	489	35/20	-	20/45	-	-						
	264	60	60	60	-	-	264	30	40	30	60	60
	266	20/30	40	40-30/40	40	40	266	30	30	30	30	30
	267	20-30-60/20-35	60	30-45/30-40	60	60	267	20	40	20	60	60
	268	40/30-25 *	45	20-45/40 **	60	60	268	30*	30	30*	60	60
	487	* plus additional school service					487/491	* plus additional school service				
	491	24/20	60	20/30	60	60		15/20	40/40	20/20	60	60
		18-26/20-24	60	20-30/20-27	60	60	689	60	60	60	-	-
	260-361	7-9/10-13	15/30	10-12/10-11	20/40	20-23 / 40-46	260-361 TRUNCK 260-361 PASADENA 260 ALTADENA	15-15/15-15 15*/15* 30	15 15 30	15-15/15-15 15/15 30	15 15 30	20 20 40
* additional school trippers to be operated to/from Blair HS												

SOURCE: METRO SAN GABRIEL VALLEY SERVICE SECTOR



# APPENDIX 7

## COMPARISON OF METRO DIRECTLY OPERATED BUS REQUIREMENTS

FEBRUARY 1, 2004 vs JUNE 30, 2003

Div. #	NEW CHANGES						PREVIOUS SHAKE-UP						DIFFERENCE			
	2-1-04			6-29-03			6-29-03			6-29-03			AM	BASE	PM	OWL
	AM	BASE	PM	OWL	AM	BASE	PM	OWL	AM	BASE	PM	OWL	AM	BASE	PM	OWL
1 REG.	129	62	128	6	126	59	127	6	126	59	127	6	3	3	1	0
1 RAPID	27	10	25	0	29	11	21	0	29	11	21	0	-2	-1	4	0
2	154	73	153	0	154	79	154	0	154	79	154	0	0	-6	-1	0
3	169	102	169	5	176	109	176	5	176	109	176	5	-7	-7	-7	0
5 REG.	174	93	174	4	163	84	166	6	163	84	166	6	11	9	8	-2
5 RAPID	45	23	42	0	44	23	42	0	44	23	42	0	1	0	0	0
6	65	22	65	0	64	23	64	0	64	23	64	0	1	-1	1	0
7 REG.	183	87	183	8	178	81	176	8	178	81	176	8	5	6	7	0
7 RAPID	39	6	36	0	41	8	41	1	41	8	41	1	-2	-2	-5	-1
8 REG.	124	57	122	5	125	58	120	5	125	58	120	5	-1	-1	2	0
8 RAPID	18	7	18	0	20	7	20	0	20	7	20	0	-2	0	-2	0
9	163	102	162	4	157	100	156	4	157	100	156	4	6	2	6	0
10 REG.	198	96	197	15	188	103	196	16	188	103	196	16	10	-7	1	-1
10 RAPID	36	28	33	0	31	25	30	1	31	25	30	1	5	3	3	-1
15 REG.	186	109	182	2	186	107	184	2	186	107	184	2	0	2	-2	0
15 RAPID	24	14	25	0	23	17	22	0	23	17	22	0	1	-3	3	0
18 REG.	219	143	219	11	245	162	245	9	245	162	245	9	-26	-19	-26	2
18 RAPID	16	8	18	0	0	0	0	0	0	0	0	0	16	8	18	0
<b>SUB-TOTAL*</b>	<b>1,969</b>	<b>1,042</b>	<b>1,951</b>	<b>60</b>	<b>1,950</b>	<b>1,056</b>	<b>1,940</b>	<b>63</b>	<b>1,950</b>	<b>1,056</b>	<b>1,940</b>	<b>63</b>	<b>19</b>	<b>-14</b>	<b>11</b>	<b>-3</b>
Highest Am or PM	*****	*****	1972	****	****	1962	****	****	****	1962	****	****	*****	10	****	Highest AM or PM
<b>RACETRACK:</b>																
Actual Max. Bus Req.	0	0	8	0	0	0	7	0	0	0	7	0	0	0	1	0
Net Max. Bus Req.	0	0	8	0	0	0	0	0	0	0	0	0	0	0	8	0
<b>HOLLYWOOD</b>																
<b>BOWL:**</b>																
Actual Max. Bus Req.	0	0	0	0	0	0	2	0	0	0	2	0	0	0	2	0
Net Max. Bus Req.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net Max. Bus Req.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>1,969</b>	<b>1,042</b>	<b>1,980</b>	<b>60</b>	<b>1,950</b>	<b>1,056</b>	<b>1,940</b>	<b>63</b>	<b>1,950</b>	<b>1,056</b>	<b>1,940</b>	<b>63</b>	<b>19</b>	<b>-14</b>	<b>12</b>	<b>-3</b>

+ Net Maximum Bus Requirements is the actual maximum number of additional buses necessary to operate Service to Hollywood Park or Santa Ana Racetracks and to the Hollywood Bowl during their seasons, respectively, over and beyond the peak requirements for regularly-scheduled service.

Highest AM or PM: This number reflects the true number of buses required to operate scheduled service on a weekday. According to the above chart, the number of buses required to operate schedule service increased by 10 buses. (1972 buses - 1962 buses = 10 bus increase)

# APPENDIX 7

LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY													FINAL			
SCHEDULING DEPARTMENT																
METRO DIRECTLY OPERATED BUS EQUIPMENT REQUIREMENTS EFFECTIVE JUNE 29, 2003																
METRO BUS MAXIMUM DAILY REQUIREMENTS			METRO BUS SPECIAL BUS REQUIREMENTS				TOTAL VEHICLE REQUIREMENTS AND STORAGE NEEDS					PERMANENT BY DIVISION		TEMPORARY BY DIVISION		
MAXIMUM BUSES NEEDED			HOLLYWOOD				SPARE BUSES		TOTAL BUS STORAGE		NET TOTAL STORAGE		PERMANENT STORAGE CAPACITY		TEMPORARY STORAGE CAPACITY	
DIV. NO.	REG. AM PEAK	PM PEAK	BOWL MAX. BUSES REQ. PM MOVE	BOWL CHANGE LETTERS	OTHER SPECIAL EVENT NET SERVICE	MAXIMUM BUSES NEEDED REG SERVICE + BOWL + SPEC.	SPARE BUSES 20% SPARE AT DIV.	TOTAL BUS STORAGE	LESS OWL BUSES	TOTAL STORAGE	PERMANENT STORAGE CAPACITY	NO. OF BUSES OVER (UNDER)	PERMANENT STORAGE CAPACITY	NO. OF BUSES OVER (UNDER)	TEMPORARY STORAGE CAPACITY	NO. OF BUSES OVER (UNDER)
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)+(G)	(J)	(K)+(H)-(I)	(L)	(M)-(N)	(O)	(P)-(Q)	(R)-(S)	
1 Reg.	126	127	0	0	0 SA (PM)	127	25.4	152	6	181	205	(24)	205	205	(24)	
1 Rapid	29	21	0	0	0	29	5.8	35	0	35	---	---	---	---	---	
2	154	154	0	0	0	154	30.8	185	0	185	195	(10)	195	195	(10)	
3	176	176	0	0	2 SA/HP (PM)	178	35.6	214	5	209	220	(11)	220	220	(11)	
5 Reg.	163	166	2	6	0	174	34.8	209	6	256	247	9	247	247	9	
5 Rapid	44	42	0	0	0	44	8.8	53	0	53	---	---	---	---	---	
6	64	64	0	3	0	67	13.4	80	0	80	79	1	79	79	1	
7 Reg.	178	176	5	4	0	185	37.0	222	8	262	248	14	248	248	14	
7 Rapid	41	41	0	0	0	41	8.2	49	1	50	---	---	---	---	---	
8 Reg.	125	120	4	6	0	130	26.0	156	5	175	249	(74)	249	249	(74)	
8 Rapid	20	20	0	0	0	20	4.0	24	0	24	---	---	---	---	---	
9	157	156	0	0	2 SA & (PM)	158	31.6	190	4	186	235	(49)	235	235	(49)	
10 REG	188	196	0	0	5 SA/HP	201	40.2	241	16	262	259	3	259	259	3	
10 RAP	31	30	0	0	0	31	6.2	37	---	37	---	---	---	---	---	
15 Reg.	186	184	2	6	2 (L163 bowl)	194	38.8	233	2	258	262	(4)	262	262	(4)	
15 Rapid	23	22	0	0	0	23	4.6	28	0	28	---	---	---	---	---	
18	245	245	3	6	0	254	50.8	305	9	296	280	16	280	280	16	
TOTAL Highest AM or PM							2,010	402.0	2,412	62	2,350	(129)	2,479	2,479	(129)	
Bus Requirement = 1962																

**NOTES:**

- Maximum Buses Needed for Regular Service is the maximum number of buses required for regularly scheduled service in the AM and PM Peak periods.
  - Buses needed for Regular Service + Bowl + Special Service is total buses needed at each division to cover regularly scheduled service plus extra Hollywood Bowl & Special Service to racetracks.
  - Hollywood Bowl Requirement is the maximum seasonal projection for sell-out performances. Bowl service will be rescheduled and re-analyzed for 2002 season.
  - Other Special Event PM Peak Service: SA=Santa Anita Race Track Service; SA & B=Santa Anita Race Track and extra service for Off-Track wagering during Hollywood Park season; HP=Hollywood Park Race Track Service. Special Event Net Service bus maximum is the net maximum number of buses operated to either racetrack.
  - Permanent and Temporary Storage Capacity - These figures were recently updated by Division Maintenance staff. Division 9 was increased by 5 spaces and Division 2 was decreased by 14 spaces per Jim Pachan (Operations Staff) in November 2001.
  - Permanent and Temporary Storage Capacity at Divisions 1 and 2 were increased from 179 and 172 to 205 and 195 spaces respectively (per Maint. Mgrs Hagenkamp and McIntyer).
  - Amount Over/Under Capacity - indicates the number of buses required to operate service that are over or under each Division's rated capacity.
  - Spare Assignments is total required buses multiplied by 20% FTA-mandated spare ratio.
  - Division 12 is currently inactive and was previously shown for historical reference and future uses. Division 12 was last rated with a bus Capacity of 112 buses.
  - Rapid Bus equipment and Regular MTA Bus equipment are counted separately at Divisions running Rapid and Regualr service.
- \* Designates the higher number of regularly scheduled buses in service as to AM Peak or PM Peak.



# APPENDIX 7

LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY												FINAL						
SERVICE SECTOR PLANNING AND SCHEDULING												PERMANENT		TEMPORARY				
METRO DIRECTLY OPERATED BUS EQUIPMENT REQUIREMENTS EFFECTIVE FEBRUARY 1, 2004												BY DIVISION		BY DIVISION				
METRO BUS MAXIMUM DAILY REQUIREMENTS			METRO BUS SPECIAL BUS REQUIREMENTS			METRO BUS TOTAL VEHICLE REQUIREMENTS AND STORAGE NEEDS						PERMANENT		TEMPORARY				
MAXIMUM BUSES NEEDED			HOLLYWOOD			OTHER			TOTAL			NO. OF BUSES OVER (UNDER)		NO. OF BUSES OVER (UNDER)				
DIV. NO.	REG. AM PEAK	SERV. PM PEAK	BOWL REQ. PM MOVE	CHANGE LETTERS	BOWL SERVICE	SPECIAL EVENT NET	OTHER SPECIAL SERVICE	MAXIMUM BUSES NEEDED + REG SERVICE + BOWL + SPEC.	SPARE BUSES 20% spaces AT DIV.	LESS OWL STORAGE NEEDED BUSES	NET TOTAL STORAGE NEEDED	PERMANENT STORAGE CAPACITY	NO. OF BUSES OVER (UNDER)	TEMPORARY STORAGE CAPACITY	NO. OF BUSES OVER (UNDER)			
(A)	(B)	(C)	(D)	(E)	(F)=(C+D+E) or (A/B)	(G)	(H)	(I)=(F+G)	(J)	(K)	(L)=(I-K)	(M)	(N)	(O)	(P)=(M-N)			
1 Reg.	128	0	0	0	0 SA (PM)	0	0	129	25.8	155	6	181	205	205	205	(24)		
1 Rapid	27	0	0	0	0	0	0	27	5.4	32	0	32	195	195	195	(10)		
2	154	0	0	0	0	0	0	154	30.8	185	0	185	220	220	220	(20)		
3	169	0	0	0	0	2 SA/HP (PM)	0	171	34.2	205	5	200	247	247	247	12		
5 Reg.	174	0	0	0	0	0	0	174	34.8	209	4	259	249	249	249	12		
5 Rapid	45	0	0	0	0	0	0	45	9.0	54	0	54	79	79	79	(1)		
6	65	0	0	0	0	0	0	65	13.0	78	0	78	248	248	248	10		
7 Reg.	183	0	0	0	0	0	0	183	36.6	220	8	258	249	249	249	(84)		
7 Rapid	39	0	0	0	0	0	0	39	7.8	47	0	47	235	235	235	(43)		
8 Reg.	124	0	0	0	0	0	0	124	24.8	149	5	165	259	259	259	12		
8 Rapid	18	0	0	0	0	0	0	18	3.6	22	0	22	262	262	262	(11)		
9	163	0	0	0	0	2 SA && (PM)	0	163	32.6	196	4	192	280	280	280	4		
10 REG	198	0	0	0	0	5 SA/HP	0	202	40.4	242	15	271	284	284	284	4		
10 RAP	36	0	0	0	0	0	0	36	7.2	43	0	43	280	280	280	4		
15 Reg.	186	0	0	0	0	0	0	186	37.2	223	2	251	284	284	284	4		
15 RAP	24	0	0	0	0	0	0	24	5.0	30	0	30	280	280	280	4		
18 REG	219	0	0	0	0	0	0	219	43.8	263	11	284	280	280	280	4		
18 RAP	16	0	0	0	0	0	0	16	3.6	22	11	284	280	280	280	4		
								1,969	395.6	2,374	60	2,325	2,479	2,479	2,479	(154)		
								1,978	2,374.6	2,374	60	2,325	2,479	2,479	2,479	(154)		
TOTAL Highest AM or PM Bus Requirement =								1972										

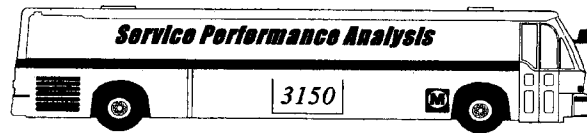
- NOTES:
- Maximum Buses Needed for Regular Service is the maximum number of buses required for regularly scheduled service in the AM and PM Peak periods.
  - Buses needed for Regular Service + Bowl + Special Service is total buses needed at each division to cover regularly scheduled service plus extra Hollywood Bowl & Special Service to racetracks.
  - Hollywood Bowl Requirement is the maximum seasonal projection for sell-out performances. Bowl service will be rescheduled and re-analyzed for 2002 season.
  - Other Special Event PM Peak Service: SA=Santa Anita Racetrack Service; SA &&=Santa Anita Racetrack and extra service for Off-Track wagering during Hollywood Park season; HP=Hollywood Park Racetrack Service. Special Event Net Service bus maximum is the net maximum number of buses operated to either racetrack.
  - Permanent and Temporary Storage Capacity - These figures were recently updated by Division Maintenance staff. Division 9 was increased by 5 spaces and Division 2 was decreased by 14 spaces per Jim Puchan (Operations Staff) in November 2001.
  - Permanent and Temporary Storage Capacity at Divisions 1 and 2 were increased from 179 and 172 to 205 and 195 spaces respectively (per Maint. Mgrs Hagenkamp and McIntyer).
  - Amount Over/Under Capacity - indicates the number of buses required to operate service that are over or under each Division's rated capacity.
  - Spare Assignments is total required buses multiplied by 20% FTA-mandated spare ratio.
  - Division 12 is currently inactive and was previously shown for historical reference and future uses. Division 12 was last rated with a bus Capacity of 112 buses.
  - Rapid Bus equipment and Regular MTA Bus equipment are counted separately at Divisions running Rapid and Regular service.

\* Designates the higher number of regularly scheduled buses in service as to AM Peak or PM Peak.



# APPENDIX 8

LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY  
OPERATIONS DEPARTMENT



**SCHEDULED SERVICE OPERATING COST FACTORS  
REPORT NO. 4-24**

*JUNE 29, 2003 2nd REVISED*

**FROM:** Jake Satin-Jacobs  
Manager, Service Performance Analysis

**TO:** Ed Muncy  
Director, Service Performance Analysis

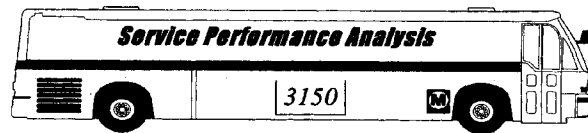
**CC:** Roderick Goldman  
Deputy Executive Officer, Service Development

**DATE OF REVISION:** March 18, 2004

**PURPOSE OF 2nd REVISION:**

Correction of Saturday and Sunday Division totals on the MIHRDIV sheet

**LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY  
OPERATIONS DEPARTMENT**



**SCHEDULED SERVICE OPERATING COST FACTORS  
REPORT NO. 4-24**

**JUNE 29, 2003**

**FROM: Jake Satin-Jacobs  
Manager, Service Performance Analysis**

**TO: Ed Muncy  
Director, Service Performance Analysis**

**CC: Roderick Goldman  
Deputy Executive Officer, Service Development**

**DATE OF ISSUE: July 29, 2003**

**REVISED: August 13, 2003**

**PURPOSE OF REPORT:**

The Scheduled Service Operating Cost Factors Report shows daily vehicle miles, hours, and equipment requirements for scheduled transit service operated by LACMTA, including BDOF but excluding contract (privatized) lines. Revenue hours include layovers but exclude deadheads. Interline savings indicate buses that are used on more than one line. Operating Cost Factors reflect the school day service. Temporary service changes are reported separately. Equipment requirements assume that a bus will not be pulled in and pulled out again during the same peak. Special event service is projected until September 2003. Rail service statistics (supplied by Rail Activation Dept.) are shown both at vehicle and train levels, adjusted to accommodate gap train operation. Rail schedules may be adjusted for maintenance of way. Yard duties are excluded.

**HIGHLIGHTS OF THIS ISSUE:**

Lines 22, 56, 112, 188, 264, 483, 561 and 631 are cancelled effective June 29, 2003.  
Routes 3, 93, 233, 252, 311, 410 and 485 are cancelled effective June 29, 2003.  
New Lines 233, 252, 485, 611, 612, 652, 681, 687, 711 and 761 commence service on June 29, 2003.  
New Routes 237, 264, 350, 360 and 361 commence service on June 29, 2003.  
Line 804 will open July 26, 2003, and Line 686 will open July 27, 2003 (not shown in this report).  
Line 401 operates only on temporary letter (not shown in this report) until opening of Line 804.  
Many lines had Division and route changes.

SCHEDULED SERVICE OPERATING COST FACTORS

EFFECTIVE: JUNE 29, 2003

SCHOOL DAY, NON-RACE, NON-BOWL SCHEDULES

SERVICE FREQUENCY	GROSS EQUIPMENT REQUIREMENTS			INTERLINE SAVINGS		VEHICLE HOURS		VEHICLE MILES		
	AM RUSH	DAY BASE	PM RUSH	OWL	AM	PM	TOTAL	REVENUE	TOTAL	REVENUE
BUS	2567	1051	2615	61	619	684	23,135.4	21,027.0	314,643	263,058
EXCEPT SAT & SUN	1164	995	1260	63	262	218	14,899.0	14,124.4	199,709	179,863
SATURDAY ONLY	811	805	948	62	142	101	11,974.2	11,385.0	164,344	149,280
SUNDAY & HOLIDAY										

BUS	133	76	129	4	0	0	1,822.8	1,704.2	41,013	40,066
EXCEPT SAT & SUN	55	76	76	4	0	0	1,259.0	1,207.7	28,008	27,562
SATURDAY ONLY	52	76	76	2	0	0	1,235.4	1,181.8	27,250	26,799
SUNDAY & HOLIDAY										

RAIL

SERVICE FREQUENCY	SCHEDULED TRAIN RUNS			TRAIN HOURS		TRAIN MILES		
	AM RUSH	DAY BASE	PM RUSH	OWL	TOTAL	REVENUE	TOTAL	REVENUE
BUS	41	24	40	2	589.2	555.2	13,538	13,286
EXCEPT SAT & SUN	21	24	24	2	454.8	436.3	10,255	10,109
SATURDAY ONLY	22	24	24	2	456.4	435.9	10,261	10,109
SUNDAY & HOLIDAY								

SPECIAL EVENT SERVICE - SEE NEXT PAGE.

ADDITIONAL EQUIPMENT REQUIREMENTS THAT ARE NOT INCLUDED IN THE DATA ON PREVIOUS PAGE

SPECIAL EVENT **APPROXIMATE** SCHEDULED SERVICE AS KNOWN AT THIS TIME (TEMPORARY CHANGES AND LEASE EVENTS NOT INCLUDED)

EVENT/SERVICE	TENTATIVE DATES OF OPERATION	DAYS	NO. DAYS	EQUIPMENT		HOURS	MILES
				A.M.	P.M.		
		TOTAL REVENUE		TOTAL REVENUE		TOTAL REVENUE	
HOLLYWOOD BOWL	6-29; 7-6,20; 8-10,24; 9-14-03	SU	( 6)	0	0	18	645
HOLLYWOOD BOWL	7-8 THROUGH 9-2; 9-4,9,11-03	TU,WE,TH	(28)	0	0	13	564
HOLLYWOOD BOWL	7-11 THROUGH 9-12-03	FR	(10)	0	0	8	761
HOLLYWOOD BOWL	7-12 THROUGH 9-13-03	SA	(10)	0	0	10	812
						68.9	1304
						54.8	1144
						81.3	1555
						90.2	1651

LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY  
 SCHEDULED SERVICE OPERATING COST FACTORS

REPORT NO. 4-24

EFFECTIVE: JUNE 29, 2003

**DAILY EXCEPT SATURDAY AND SUNDAY**

SCHOOL DAY, NON-RACE, NON-BOWL SCHEDULES

LINE	DIVISIONS		GROSS EQUIPMENT REQUIREMENTS		INTERLINE SAVINGS			VEHICLE HOURS		VEHICLE MILES		
	7	10	AM RUSH	DAY BASE	PM RUSH	OWL	AM	PM	TOTAL	REVENUE	TOTAL	REVENUE
2	7	10	58	19	52		13	12	508.7	463.5	6350.3	5454.8
4	6	7 10	78	27	71	7	10	16	655.7	599.5	7954.6	6614.6
10	1	2 7	35	12	36	1	6	3	316.0	292.9	3520.6	2993.1
14	7	10	50	18	51	2	9	10	397.9	368.7	4398.8	3927.3
16	1	2 7 10	70	19	76		31	30	440.6	394.9	5016.9	4141.8
18	1	2	49	15	47	2	20	17	349.5	319.6	3705.9	3122.1
20	6	7 10	49	19	52	5	9	10	436.7	400.5	4682.5	4021.4
26	1	2	50	18	42	1	4	4	462.9	410.1	6109.2	4687.0
28	3	9	62	29	69	3	7	16	664.0	586.8	8176.1	6458.0
30	6	7 10	45	23	51	2	12	9	460.2	413.5	5064.2	3906.7
33	6	7 10	75	22	74	3	25	24	551.6	502.7	7239.0	6124.9
38	7	10	32	10	34		12	18	206.1	193.1	2686.0	2434.4
40	5	10 18	59	22	65	2	22	25	494.5	450.4	6381.4	5124.7
42	5	10 18	15	2	13		8	8	108.1	101.9	1243.5	1083.2
45	1	2	26	14	25	2		2	294.7	265.7	3683.2	2987.8
53	1	18	33	11	25		6	6	247.5	221.2	3089.8	2412.9
55	1	2 18	36	8	32	2	23	14	233.3	206.8	2971.0	2356.8
60	1	2 18	47	21	48	4	3	4	512.9	463.2	6762.2	5330.3
65	1	2	9	3	7		2	1	67.9	62.9	759.3	652.2
66	1	2	80	15	63		34	33	427.7	367.1	4978.5	3670.2
68	6	7 10	50	16	53		21	23	364.4	332.1	4470.1	* 3719.9
70	3	9	40	16	40	2	14	20	294.4	286.1	3871.1	3705.7
76	3	9	22	13	26	2	6	8	221.9	215.1	2502.2	2340.8
78	3	9	29	11	37		11	11	288.0	265.8	3873.5	3378.9
81	3	9 18	40	19	43		6	12	396.4	364.9	5173.9	4403.0
90	15		21	8	18		7	4	182.9	169.0	2836.1	2447.3
92	15		24	12	35	2	4	11	242.3	225.0	3309.5	2831.8
94	15		42	17	41		9	14	410.8	378.0	6437.9	5409.7
102	2		4	2	6			2	37.7	34.9	434.7	369.6
105	1	2 7	25	13	29	1	5	3	279.6	264.5	3632.0	3340.4

LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY  
 SCHEDULED SERVICE OPERATING COST FACTORS  
 EFFECTIVE: JUNE 29, 2003

**DAILY EXCEPT SATURDAY AND SUNDAY**  
 SCHOOL DAY, NON-RACE, NON-BOWL SCHEDULES

LINE	DIVISIONS	GROSS EQUIPMENT REQUIREMENTS				INTERLINE SAVINGS		VEHICLE HOURS		VEHICLE MILES	
		AM RUSH	DAY BASE	PM RUSH	OWL	AM	PM	TOTAL	REVENUE	TOTAL	REVENUE
107	5	3	3	3				51.1	50	559.9	543.2
108	5 18	28	14	26		5		296.1	266.3	3913.3	3319.3
110	5	21	9	23		6	2	220.5	194	2834.8	2358.2
111	5 18	24	11	21	2	8	5	225.2	207.5	3090.5	2627.4
115	5 18	38	13	30		12	9	294.2	257.1	4148.1	3214.6
117	5 18	15	11	15		3	1	168.7	157.6	2242.3	1940.4
119	5 18	6	2	6		3	3	46.6	44.2	748.9	683.1
120	18	10	7	11				150.6	139.3	2171.1	1811.4
124	18	4	3	4		1		49.8	46.8	620.0	537.2
127	18	3	3	3				45.6	44.1	524.5	485.6
150	8	37	16	35	2	13	9	333.8	313.5	4583.2	4048.3
152	8 15	32	9	36		6	18	241.6	215.8	3786.8	3027.9
154	8 15	11	5	12		2	6	76.9	69.5	1262.8	1053.1
156	8 15	29	10	31	3	9	9	282.6	253.5	3981.4	3154.3
158	8 15	12	3	9		5	5	63.3	55.3	1005.7	811.8
161	8	17	3	7		9	2	76.6	61.5	1524.0	1066.5
163	8 15	21	12	26		3	3	228.7	211.8	3306.2	2820.8
165	8 15	42	17	56		15	22	380.6	343.7	6125.8	5094.6
166	8 15	39	10	39		15	21	240.2	214.2	4139.8	3379.6
168	8	3	2	5			2	28.1	27.0	457.9	437.7
169	8 15	9	3	12		3	6	66.7	60.5	1027.2	865.4
170	9	7	5	6		2	1	58.4	56.9	685.5	651.9
175	3 9	6	1	14		2	12	38.7	29.0	435.2	262.5
176	3 9	3	3	3				45.4	44.7	608.9	590.4
180	3 9	24	20	31	2		4	358.3	330.7	4812.9	4041.1
200	1 2	17	9	17		2	1	190.8	182.1	1678.7	1525.4
201	3	5	3	4				49.2	45.6	549.8	480.0
202	18	6	5	6		1	1	64.2	61.4	948.9	871.8
204	5 18	22	14	23	4	4	4	287.9	267.2	3141.0	2736.9
206	3 5 18	19	9	31		3	5	236.0	213.8	2785.2	2331.3



LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY  
 SCHEDULED SERVICE OPERATING COST FACTORS  
 EFFECTIVE: JUNE 29, 2003

**DAILY EXCEPT SATURDAY AND SUNDAY**  
 SCHOOL DAY, NON-RACE, NON-BOWL SCHEDULES

LINE	DIVISIONS	GROSS EQUIPMENT REQUIREMENTS		INTERLINE SAVINGS		VEHICLE HOURS		VEHICLE MILES			
		AM RUSH	DAY BASE	PM RUSH	OWL	AM	PM	TOTAL	REVENUE	TOTAL	REVENUE
207	5 18	41	24	44	2	2	5	463.0	431.1	5534.1	4746.4
209	5	4	3	7			2	52.2	49.0	709.6	651.2
210	18	34	17	39		6	4	370.5	336.6	5047.2	4051.7
211	18	11	3	8		4	4	64.1	55.6	880.5	691.3
212	5 18	26	11	29		3	3	236.0	207.2	2793.7	2180.2
217	7 10	29	8	42	2	19	21	272.2	252.3	2737.0	2453.7
220	7	7	3	3		3		44.8	42.4	695.2	635.9
230	15	20	7	16		8	4	135.3	124.0	2016.8	1691.2
233	15	13	7	9		4		130.9	126.4	1576.1	1477.6
234	15	26	14	24		1	1	269.9	248.1	4111.6	3495.8
236	8	5	4	10			4	72.8	65.3	1207.4	1004.0
243	8	15	4	15		9	7	81.3	74.3	1225.7	1054.8
245	8	11	2	11		7	8	52.9	49.1	844.1	765.0
250	3	2	2	2				27.5	26.7	311.3	295.3
251	3 18	29	19	28	1	1	4	330.8	316.6	3644.8	3299.7
252	3	3	2	4			1	40.6	38.7	461.7	431.2
255	3	2	2	3			1	32.1	31.3	321.9	299.7
259	9	5	4	5				69.8	65.4	938.3	797.1
260	3 9 18	28	16	32		3	2	347.4	315.4	4917.7	3941.6
265	18	4	5	5				65.4	61.5	1070.3	945.1
267	3 9	15	7	17		6	9	124.3	114.0	1804.2	1571.6
268	3 9	13	5	14		3	7	85.8	73.4	1346.6	1001.5
305	7 18	11	8	11				142.7	133.3	1919.8	1722.6
362	1 2	15	5	9		5	1	110.6	100.7	1611.1	1305.7
418	8	10		8		4	1	37.9	34.5	655.9	543.4
426	8	11		9		6	5	41.8	39.3	711.9	639.6
434	6 10	20	6	20		1	4	171.5	130.5	4122.5	3033.5
439	18	11	5	12		2	1	115.7	105.8	1818.5	1560.7
444	18	21	5	12		3	6	117.4	100.4	2324.3	1818.0
445	18	4	3	5				54.8	49.8	1236.3	1058.2

LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY  
 SCHEDULED SERVICE OPERATING COST FACTORS

EFFECTIVE: JUNE 29, 2003

**DAILY EXCEPT SATURDAY AND SUNDAY**

SCHOOL DAY, NON-RACE, NON-BOWL SCHEDULES

LINE	DIVISIONS	GROSS EQUIPMENT REQUIREMENTS			INTERLINE SAVINGS		VEHICLE HOURS		VEHICLE MILES		
		AM RUSH	DAY BASE	PM RUSH	OWL	AM	PM	TOTAL	REVENUE	TOTAL	REVENUE
446	10 18	20	9	17		6	3	165.0	152.5	2803.7	2439.7
460	1 2	15	7	19		1	4	148.9	142.4	2915.4	2709.8
471	9	4	3	4		1	1	55.0	49.5	927.4	764.4
484	9	24	10	24		8	5	202.5	189.2	4090.8	3585.1
485	3 9	12	5	17		5	8	127.8	118.5	1882.9	1666.6
487	3 9	20	5	15		5	4	139.3	126.1	2522.1	2201.4
489	3 9	5	5	5		4	5	13.5	10.6	231.1	162.4
490	3 9	20	8	20		7	6	152.5	142.6	2798.4	2466.2
550	7 10 18	10	4	10		1	1	123.5	116.6	2584.2	2397.0
576	1	5	5	5		3	2	30.5	21.9	469.0	252.2
611	1 2	6	5	8				85.3	82.3	980.9	931.6
612	2	6	6	6				89.7	85.5	1200.9	1085.0
620	3 10	1	3	9			6	32.2	30.4	334.8	296.4
681	18	5	2	4		2		53.1	48.8	617.3	495.0
687	9	5	3	6			1	68.3	59.6	869.2	687.5
711	5	12	6	11				136.3	122.5	2128.8	1746.8
720	1 7 10	85	37	78		2	3	924.4	782.9	14344.5	11093.5
745	1	22	7	21		4	4	177.2	153.6	2567.4	1991.0
750	8 15	25	11	26				242.1	205.8	4223.9	3299.5
754	5	33	17	31		1		345.2	307.3	5341.5	4646.4
761	15	18	13	20			4	210.0	194.9	3201.2	2756.1
801	11	51	30	51				654.1	629.1	13843.4	13613.4
802	20	62	36	58				888.8	806.9	19065.4	18393.3
803	22	20	10	20	4			279.9	268.2	8104.4	8059.8
SCHEDULED TRAIN RUNS											
LINE	DIVISIONS	AM RUSH	DAY BASE	PM RUSH	OWL	TRAIN HOURS		TRAIN HOURS		TOTAL	REVENUE
801	11	19	10	19		242.7	232.4	5155.6	5061.8	5155.6	5061.8
802	20	12	9	11		191.1	174.4	3975.9	3841.5	3975.9	3841.5
803	22	10	5	10	2	155.4	148.4	4406.8	4382.7	4406.8	4382.7

LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY  
 SCHEDULED SERVICE OPERATING COST FACTORS

EFFECTIVE: JUNE 29, 2003

**SATURDAY ONLY**

SCHOOL DAY, NON-RACE, NON-BOWL SCHEDULES

LINE	DIVISIONS	GROSS EQUIPMENT REQUIREMENTS			INTERLINE SAVINGS		VEHICLE HOURS		VEHICLE MILES		
		AM RUSH	DAY BASE	PM RUSH	OWL	AM	PM	TOTAL	REVENUE	TOTAL	REVENUE
2	7 10	26	19	29		8	10	292.6	282.8	3612.4	3429.9
4	7 10	45	32	56	7	18	24	545.9	516.0	6530.8	5896.0
10	2 7 10	17	18	23	1	2	3	229.1	218.3	2483.3	2231.1
14	7 10	23	15	19	2	9	4	217.1	208.2	2571.1	2427.5
16	1 2 7 10	27	17	29		15	11	273.2	258.8	2941.0	2688.5
18	1 2	24	19	24	2	8	6	284.9	264.6	3028.1	2629.8
20	7 10	25	16	27	5	8	11	304.5	293.9	3471.0	3294.5
26	1 2	28	28	29	1	1	1	403.4	379.9	4986.4	4356.6
28	3	24	26	28	3			410.8	388.9	4944.8	4439.3
30	7 10	21	20	33	2	3	10	312.3	291.2	3254.3	2795.2
33	7 10	36	28	39	3	14	11	349.2	337.4	4455.6	4192.3
38	7 10	15	8	13		8	4	115.3	110.0	1543.8	1423.2
40	5 10 18	27	26	34	2	7	10	377.5	359.6	4554.7	4063.2
42	5 10 18	11	5	9		6	4	83.0	79.4	988.5	888.3
45	1 2	13	16	16	2			217.6	203.1	2729.8	2331.7
53	1 18	15	13	17		3	4	174.2	167.2	2059.1	1870.7
55	1 2 18	19	6	19	2	14	11	154.7	136.2	2027.8	1564.5
60	1 2 18	28	27	32	4	7	4	389.6	358.8	5374.3	4359.9
65	2	2	2	2				28.0	27.2	329.4	311.8
66	1 2	32	17	29		11	10	284.2	255.8	3337.3	2636.0
68	7 10	19	19	32		5	11	237.2	226.1	2831.6	2596.8
70	9	15	16	15	2			217.3	214.0	2737.0	2684.2
76	9	11	12	12	2			165.5	161.8	1917.3	1835.5
78	9	11	12	12				174.8	167.8	2371.2	2229.8
81	3 18	17	18	20				275.8	265.6	3516.4	3258.0
90	15	11	9	9		2		119.0	112.7	1887.5	1667.3
92	15	15	14	17	2	3	3	197.7	191.9	2627.4	2454.6
94	15	20	18	23		2	3	265.6	252.1	4178.3	3720.9
102	2	2	2	2				30.5	29.7	377.9	356.0
105	1 2 7	14	12	16	1	4	4	172.8	167.2	2236.0	2136.5

LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY  
 SCHEDULED SERVICE OPERATING COST FACTORS  
 EFFECTIVE: JUNE 29, 2003

REPORT NO. 4-24

**SATURDAY ONLY**  
 SCHOOL DAY, NON-RACE, NON-BOWL SCHEDULES

LINE	DIVISIONS	GROSS EQUIPMENT REQUIREMENTS				INTERLINE SAVINGS		VEHICLE HOURS		VEHICLE MILES	
		AM RUSH	DAY BASE	PM RUSH	OWL	AM	PM	TOTAL	REVENUE	TOTAL	REVENUE
107	5	2	2	3		1		36.0	35.0	425.0	410.2
108	5 18	13	11	14		1		167.7	158.6	2314.7	2048.4
110	5	8	8	8		1		117.3	111.0	1459.9	1343.7
111	5 18	16	10	11	2	6	1	163.5	153.2	2367.5	2092.5
115	5	13	13	13		3		173.1	161.5	2415.3	2059.6
117	5 18	10	10	13		2	1	167.2	157.2	2352.4	2046.6
120	18	7	6	7		1		103.6	95.8	1516.4	1258.1
124	18	3	1	3		2	2	22.9	21.2	294.9	246.4
150	8	18	13	13	2	5		231.2	224.9	3170.6	3011.4
152	8 15	15	10	12		5	2	146.5	141.7	2055.3	1919.3
154	8 15	8	2	7		6	5	49.0	46.4	895.5	812.2
156	8 15	14	8	10	3	6	2	180.9	172.3	2479.6	2223.5
158	8	4	2	4		2	2	33.3	31.0	613.8	557.8
161	8	4	2	3		2		32.9	30.0	649.2	550.1
163	8 15	12	10	11		3		163.6	156.7	2199.7	2006.5
165	8 15	21	14	20		8	6	220.0	212.2	3439.2	3199.9
166	8 15	10	7	7		3		105.9	101.7	1906.9	1771.6
168	8	2	2	2				24.4	23.3	394.6	366.4
180	3	14	20	20	2	2		267.2	249.3	3443.2	2946.1
200	2	9	10	10				151.6	147.5	1298.1	1225.7
201	3	2	2	2				28.1	27.1	314.9	292.1
202	18	4	2	2		2		35.2	33.9	473.3	433.8
204	5 18	14	13	14	4	1	1	230.4	218.6	2530.3	2300.0
206	3 5	11	9	9		2		137.9	133.0	1537.1	1425.0
207	5 18	26	25	26	2	3	1	354.0	338.5	4133.3	3720.1
209	5	2	2	2				30.7	29.4	466.9	444.0
210	18	14	15	19		5	3	199.1	187.1	2689.2	2325.3
212	5	8	9	10		1		127.6	121.8	1466.1	1341.2
217	7 10	20	11	18	2	10	6	184.6	175.1	1846.0	1694.8
220	7 10	4	3	4		1	1	38.4	36.7	600.9	562.6

LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY  
 SCHEDULED SERVICE OPERATING COST FACTORS  
 EFFECTIVE: JUNE 29, 2003

REPORT NO. 4-24

**SATURDAY ONLY**

SCHOOL DAY, NON-RACE, NON-BOWL SCHEDULES

LINE	DIVISIONS	GROSS EQUIPMENT REQUIREMENTS				INTERLINE SAVINGS		VEHICLE HOURS		VEHICLE MILES	
		AM RUSH	DAY BASE	PM RUSH	OWL	AM	PM	TOTAL	REVENUE	TOTAL	REVENUE
230	15	7	6	7		1	1	87.4	83.5	1275.6	1155.0
233	15	5	6	6				95.7	92.3	1239.6	1149.6
234	15	11	10	11		1	1	133.0	127.1	2268.7	2093.0
236	8	2	2	2				27.5	26.1	476.4	434.6
243	8	7	4	8		3	4	37.1	36.3	586.7	572.6
245	8	4	2	4		2	2	27.2	26.7	486.0	475.4
250	3	1	1	1				14.0	13.5	153.7	145.3
251	3	12	12	12	1			194.9	188.7	2149.7	1955.9
252	3	2	2	2				25.3	24.6	297.2	284.8
255	3	2	2	2				30.6	30.1	314.6	303.6
260	9	14	15	15				217.9	207.3	3089.1	2744.4
267	9	5	5	5				67.9	64.8	1010.4	933.9
268	9	3	3	3				42.3	40.6	607.4	558.6
305	7	8	8	8				111.0	105.7	1464.0	1358.0
362	1	6	5	5		2		69.7	66.2	984.8	877.8
434	10	11	3	9				99.9	80.9	2609.9	1953.6
439	18	8	7	13		1	4	77.9	73.3	1294.1	1161.9
444	18	7	3	7		5	4	53.5	51.0	1046.3	981.6
445	18	3	3	4				43.7	38.6	988.5	794.2
446	10	12	10	16		3	5	113.5	109.2	2082.2	1943.7
460	1	9	11	13			2	126.1	120.9	2584.3	2439.8
471	9	2	2	5				42.5	38.1	803.4	655.4
484	9	7	7	10		1		116.8	111.2	2358.5	2151.3
485	3	5	5	5				85.8	81.9	1299.7	1197.6
487	9	5	5	5				74.1	71.9	1211.5	1164.3
490	9	5	5	5				73.7	71.9	1310.2	1255.3
550	7	6	7	7				86.9	82.5	1964.4	1839.3
611	2	5	5	5				82.9	81.1	960.7	925.9
612	2	6	6	6		1		89.7	85.1	1212.2	1085.0
681	18	3	2	3		1		34.1	32.1	400.2	333.0

LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY  
 SCHEDULED SERVICE OPERATING COST FACTORS  
 EFFECTIVE: JUNE 29, 2003

**SATURDAY ONLY**

SCHOOL DAY, NON-RACE, NON-BOWL SCHEDULES

LINE	DIVISIONS	GROSS EQUIPMENT REQUIREMENTS				INTERLINE SAVINGS		VEHICLE HOURS		VEHICLE MILES	
		AM RUSH	DAY BASE	PM RUSH	OWL	AM	PM	TOTAL	REVENUE	TOTAL	REVENUE
687	9	3	3	3			47.5	44.5	542.0	464.0	
711	5	6	7	7			90.1	84.0	1393.8	1217.6	
720	7 10	32	35	39	2		546.2	501.7	8366.0	7432.6	
745	1	7	8	9			104.4	99.2	1410.7	1262.9	
750	8 15	10	11	11		1	167.7	158.7	2631.2	2377.0	
754	5	14	16	16			212.1	198.9	3254.9	3013.7	
761	15	8	9	9			121.4	116.4	1928.5	1768.6	
801	11	21	30	30			450.8	441.1	9365.7	9250.9	
802	20	24	36	36			613.3	577.9	13135.9	12827.6	
803	22	10	10	10	4		194.9	188.7	5506.0	5483.6	

LINE	DIVISIONS	SCHEDULED TRAIN RUNS				TRAIN HOURS		TRAIN MILES	
		AM RUSH	DAY BASE	PM RUSH	OWL	TOTAL	REVENUE	TOTAL	REVENUE
801	11	9	10	10		176.8	172.6	3654.2	3608.1
802	20	7	9	9		163.8	153.6	3453.6	3367.5
803	22	5	5	5	2	114.2	110.1	3146.8	3133.8

LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY  
 SCHEDULED SERVICE OPERATING COST FACTORS  
 EFFECTIVE: JUNE 29, 2003

**SUNDAY ONLY**

SCHOOL DAY, NON-RACE, NON-BOWL SCHEDULES

LINE	DIVISIONS	GROSS EQUIPMENT REQUIREMENTS			INTERLINE SAVINGS		VEHICLE HOURS		VEHICLE MILES		
		AM RUSH	DAY BASE	PM RUSH	OWL	AM	PM	TOTAL	REVENUE	TOTAL	REVENUE
2	7 10	16	14	18		6	4	207.9	199.0	2610.4	2434.5
4	7 10	31	29	43	7	7	12	420.5	397.5	5213.9	4661.3
10	2 7	9	11	12	1	2	1	148.8	143.1	1758.7	1626.8
14	7 10	14	13	15	2	3	2	180.7	174.7	2106.3	2012.8
16	1 7 10	12	15	20	2	2	5	213.1	205.1	2264.2	2113.6
18	1 2	11	15	18	2		1	240.4	229.7	2681.4	2442.6
20	7 10	20	16	24	5	5	6	293.3	281.3	3405.2	3231.8
26	1 2	13	21	21	1			274.2	257.5	3491.5	3055.3
28	3	21	23	23	3			341.9	325.0	4148.6	3772.9
30	10	16	17	18	2	3	1	250.3	237.1	2646.6	2360.5
33	7 10	21	19	30	4	6	9	300.8	290.1	3920.5	3689.3
38	7 10	10	6	7		6	1	81.9	78.6	1109.9	1043.1
40	5 10 18	21	21	28	2	4	7	261.4	248.7	3288.3	2940.9
42	10 18	5	2	5		4	3	43.2	42.6	502.2	486.5
45	1	9	11	13	2	1		180.0	166.2	2333.9	1976.3
53	1 18	12	11	11		3		126.1	123.3	1615.1	1565.1
55	2 18	13	6	10	2	6	3	114.4	103.3	1494.9	1227.5
60	1 18	16	18	19	4	2		274.5	254.1	3934.5	3263.6
65	2	2	2	2				24.0	23.2	284.6	267.0
66	1 2	7	11	16			2	161.2	154.2	1831.8	1646.6
68	7 10	12	13	15		1	2	160.7	153.7	2046.6	1881.4
70	9	13	14	14	2			192.5	189.1	2484.6	2417.0
76	9	8	10	9	2	1		131.4	127.9	1581.3	1501.9
78	9	10	10	10				146.7	140.7	2133.6	1999.6
81	3 18	12	16	17			1	220.0	211.0	2877.7	2647.9
90	15	5	5	5		1		72.3	70.2	1106.8	1053.9
92	15	13	10	10	2	6		153.1	147.1	2164.1	1979.5
94	15	15	15	17		2		200.3	191.8	3213.8	2950.5
102	2	2	2	2				28.1	27.4	347.6	329.2
105	1 2 7	11	9	10	1	4		126.0	122.0	1695.8	1621.6

LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY  
 SCHEDULED SERVICE OPERATING COST FACTORS

REPORT NO. 4-24

EFFECTIVE: JUNE 29, 2003

**SUNDAY ONLY**

SCHOOL DAY, NON-RACE, NON-BOWL SCHEDULES

LINE	DIVISIONS	GROSS EQUIPMENT REQUIREMENTS			INTERLINE SAVINGS		VEHICLE HOURS		VEHICLE MILES	
		AM RUSH	DAY BASE	PM RUSH	OWL	AM	PM	TOTAL	REVENUE	TOTAL
107	5	2	2	2			34.0	33.5	403.2	396.8
108	5	9	10	10			138.0	131.1	1986.8	1771.5
110	5	4	6	6			81.9	78.2	1095.4	1026.9
111	5 18	12	11	12	2	3	159.3	149.3	2257.9	1994.0
115	5	8	9	10		1	135.0	127.2	2055.1	1810.3
117	5 18	10	8	11		3	142.4	132.7	2057	1774.5
120	18	3	5	6			79.4	73.9	1243.4	1055.7
124	18	3	2	2		1	22.4	21.4	273.9	246.4
150	8	15	13	14	2	3	214	206.5	3140	2943.8
152	8 15	12	10	10		3	130.5	126.5	1942.5	1824.3
156	8 15	9	9	10	3		172.2	164.8	2372.9	2158.9
158	8	4	2	4		2	29.1	26.7	539.2	483.2
161	8	2	2	2			27.2	25.6	513	461.8
163	8 15	8	8	8			125.1	119.7	1793.6	1629.8
165	8 15	15	12	13		3	169.3	162.1	2701.7	2486.7
166	8 15	6	4	9		2	86.4	82.3	1554.9	1441.3
180	3	11	17	17	2		232.8	217	3065	2619
200	2	6	8	8			120.6	116.8	1071.7	1006.4
201	3	1	2	2			23.1	22.1	266.6	243
202	18	3	2	2		1	35	33.7	471.5	433.8
204	5 18	11	10	12	4		199.1	188	2208.5	1986.5
206	3 5	10	8	8		2	120.3	115.1	1424.1	1302.6
207	5 18	16	18	19	2	1	268.4	257.4	3189.8	2892.3
210	18	10	11	12		1	167.6	159.4	2257.4	2012.1
212	5 18	7	6	6		3	90	85.7	1026.0	935.4
217	7 10	11	8	10	2	7	142.8	134.7	1485.1	1359.8
220	7	4	3	4		3	37.9	36.8	589.3	562.6
230	15	6	6	6		2	79	74.8	1145.3	1024.9
233	15	6	6	6			98.1	94.8	1287.8	1197.8
234	15	9	9	10		1	124.5	117.1	2094.8	1871.8



LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY  
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REPORT NO. 4-24

**SUNDAY ONLY**

SCHOOL DAY, NON-RACE, NON-BOWL SCHEDULES

LINE	DIVISIONS	GROSS EQUIPMENT REQUIREMENTS			INTERLINE SAVINGS		VEHICLE HOURS		VEHICLE MILES	
		AM RUSH	DAY BASE	PM RUSH	OWL	AM	PM	TOTAL	REVENUE	TOTAL
236	8	2	2	2			25.9	24.5	457.2	409.8
245	8	4	2	4		2	22.8	22.5	405.8	397.2
250	3	1	1	1		2	11.1	10.6	125.2	113.6
251	3 18	9	10	10	1	1	157.8	150.3	1810.7	1574.2
252	3	2	2	2			25.4	24.7	261.8	249.2
255	3	2	2	2			25	24.5	255.4	244.4
260	9 18	12	14	16			196.2	184.6	2930.9	2575.2
267	9	5	5	5			67.9	64.8	1010.4	933.9
268	9	3	3	3			40.4	38.0	585.3	508.4
305	7 18	8	8	8			111.0	105.7	1464.0	1358
362	1	5	4	4		1	69.2	66.4	974.3	877.8
434	10	6	3	6			62.7	55.8	1506.4	1305.3
439	18	7	4	9		3	78.3	72.3	1331.9	1162.4
444	18	4	2	7		2	47.5	45.6	918.8	866.2
445	18	3	3	4		5	43.7	38.6	988.5	794.2
446	10 18	10	6	14		5	113.1	107.5	2103.4	1932.3
460	1	8	8	8		9	122.3	118.7	2533.1	2426.5
471	9	3	2	4		1	39.8	35.4	785.1	638.5
484	9	6	7	10		1	108.2	102.9	2299	2120.8
485	3	5	5	5			85.8	81.8	1289.5	1197.6
487	9	7	4	7		3	53.1	50.4	901.7	840.7
490	9	6	3	6		3	52	50.2	939.8	876
550	7 18	6	7	8			86.8	82.3	1964.6	1839.2
611	2	5	5	5			82.9	81.1	960.7	925.9
612	2	6	5	5		1	89.9	85.7	1202.3	1085
681	18	3	2	2		1	31.4	30	335.0	297.0
687	9	2	3	3			43.8	40.8	527.5	449.5
711	5	4	6	6			68.4	64.5	962.4	861
720	7 10	26	30	34			487.6	448.7	7582.4	6717.7
745	1	7	7	7			91.6	88.1	1250.2	1151.7
750	8	9	11	11			163.9	156.5	2583.5	2376.3

LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY  
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 EFFECTIVE: JUNE 29, 2003

**SUNDAY ONLY**

SCHOOL DAY, NON-RACE, NON-BOWL SCHEDULES

LINE	DIVISIONS	GROSS EQUIPMENT REQUIREMENTS			INTERLINE SAVINGS		VEHICLE REQUIREMENTS		VEHICLE HOURS		VEHICLE MILES		
		AM RUSH	DAY BASE	PM RUSH	OWL	AM	PM	TOTAL	REVENUE	TOTAL	REVENUE	TOTAL	REVENUE
754	5	8	11	11				133.6	124.7	2017.5	1852.1	2017.5	1852.1
761	15	4	6	6			80.1	76.8	76.8	1273.3	1169.8	1273.3	1169.8
801	11	21	30	30			450.8	441.1	441.1	9365.7	9250.9	9365.7	9250.9
802	20	24	36	36			613.3	577.9	577.9	13135.9	12827.6	13135.9	12827.6
803	22	7	10	10	2		171.3	162.8	162.8	4748.4	4720.3	4748.4	4720.3
801	11	9	10	10			176.8	172.6	172.6	3654.2	3608.1	3654.2	3608.1
802	20	7	9	9			163.8	153.6	153.6	3453.6	3367.5	3453.6	3367.5
803	22	6	5	5	2		115.8	109.7	109.7	3152.8	3133.8	3152.8	3133.8

LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY  
 NAME OF LINE AND SCHEDULED VEHICLES

LINE	N.A.M.E. O.F. L.I.N.E	WEEKDAYS						SATURDAYS						SUNDAYS							
		AM/PEAK		BASE		Interline Savings		AM/PEAK		BASE		Interline Savings		AM/PEAK		BASE		Interline Savings			
		AM	PM	OWL	PM	PEAK	AM	PM	OWL	PM	PEAK	AM	PM	OWL	PM	PEAK	AM	PM	OWL	PM	PEAK
2	SUNSET BLVD. - BEVERLY DR.	58	19	52	7	13	12	26	19	29	8	10	16	7	18	24	14	18	6	7	1
4	SANTA MONICA BLVD	78	27	71	1	10	16	45	32	56	18	24	31	1	29	43	14	18	6	7	1
10	MELROSE-TEMPLE-SAN PEDRO ST	35	12	36	1	6	3	17	18	23	2	3	9	1	11	12	11	12	1	2	1
14	BEVERLY BLVD.-WEST ADAMS	50	18	51	2	9	10	23	15	19	2	4	14	2	13	15	13	15	2	3	1
16	WEST THIRD ST.	70	19	76	2	31	30	27	17	29	15	11	12	2	15	20	15	20	2	3	1
18	W. SIXTH ST.-WHITTIER BLVD	49	15	47	2	20	17	24	19	24	2	8	6	2	11	15	15	18	2	3	1
20	WILSHIRE BLVD.-J.C.L.A.-SANTA MONICA	49	19	52	5	9	10	25	16	27	5	8	11	2	16	24	16	24	5	6	1
26	SEVENTH ST.-VIRGIL AVE.-AVALON BLVD.	50	18	42	1	4	4	28	28	29	1	1	13	2	21	21	21	21	1	1	1
28	W. OLYMPIC BL.-YORK BL.-EAGLE ROCK BL.	62	29	69	3	7	16	24	26	28	3	10	16	2	23	23	23	23	3	3	1
30	W. PICO BLVD.-E. FIRST ST.-FLORAL DR.	45	23	51	2	12	9	21	20	33	2	3	10	2	17	18	17	18	2	2	1
33	VENICE BLVD.	75	22	74	3	25	24	36	28	39	3	14	11	2	19	30	19	30	4	4	1
38	W. JEFFERSON BLVD.-CITY TERRACE	32	10	34	2	12	18	15	8	13	8	4	10	2	21	28	21	28	2	2	1
40	HAWTHORNE-LAX-LOS ANGELES	59	22	65	2	22	25	27	26	34	2	7	10	2	21	28	21	28	2	2	1
42	L.A.-WESTCHESTER-LAX	15	2	13	2	8	8	11	5	9	6	4	5	2	5	5	2	5	2	2	1
45	BROADWAY-MERCURY AVE.	26	14	25	2	2	13	16	16	16	2	9	9	2	11	13	11	13	2	2	1
53	CENTRAL AVE.	33	11	25	6	6	6	15	13	17	3	4	12	2	11	11	11	11	2	2	1
55	L.A.-COMPTON AVE.-IMPERIAL STA.	36	8	32	2	23	14	19	6	19	2	14	11	2	6	10	6	10	2	2	1
60	LONG BEACH BL.-SANTA FE AVE.	47	21	48	4	3	4	28	27	32	4	7	4	2	18	19	18	19	4	4	1
65	WASHINGTON BLVD.-INDIANA ST.-GAGE AVE.	9	3	7	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	1
66	EAST OLYMPIC BLVD.-WEST 8TH ST.	80	15	63	34	33	33	32	17	29	11	10	7	11	16	16	16	17	1	1	1
68	WEST WASHINGTON BLVD. - CHAVEZ AVE.	50	16	53	21	23	19	19	32	32	5	11	12	12	13	15	12	13	1	1	1
70	LOS ANGELES-EL MONTE VIA GARVEY AVE.	40	16	40	2	14	20	15	16	15	2	3	13	2	14	14	13	14	2	2	1
76	L.A.-EL MONTE VIA VALLEY BLVD.	22	13	26	2	6	8	11	12	12	2	8	8	2	10	9	10	9	2	2	1
78	L.A.-ALHAMBRA-SO. ARCADIA-ARCADIA	29	11	37	11	11	11	11	12	12	2	10	10	2	10	10	10	10	2	2	1
81	FIGUEROA ST.	40	19	43	6	12	12	18	20	20	2	16	16	2	16	17	16	17	2	2	1
90	LOS ANGELES-SUNLAND-SYLMAR	21	8	18	7	4	4	11	9	9	2	3	3	5	5	5	5	5	2	2	1
92	LOS ANGELES-GLENDALE-BURBANK-SAN FERNANDO	24	12	35	2	7	11	15	14	17	2	3	13	2	10	10	10	10	2	2	1
94	LOS ANGELES-SAN FERNANDO	42	17	41	9	14	14	20	18	23	2	3	15	2	15	17	15	17	2	2	1
102	E. JEFFERSON BLVD.-COLISEUM ST.	4	2	6	1	2	2	2	2	2	1	4	4	2	2	2	2	2	1	1	1
105	VERNON AVE.-LA CIENEGA BLVD.	25	13	29	2	5	3	14	12	16	4	4	11	2	9	10	9	10	1	1	1
107	54TH ST.-FAIRVIEW BLVD.-SANTA ANA ST.	3	3	3	2	2	2	2	2	3	2	1	2	2	2	2	2	2	2	2	1
108	SLAUSON - EASTERN AVE.	28	14	26	5	5	5	13	11	14	2	1	9	2	10	10	10	10	2	2	1
110	GAGE AVE.-CENTINELA AVE.-FOX HILLS MALL	21	9	23	6	2	2	8	8	8	1	4	4	6	6	6	6	6	2	2	1
111	LAX-FLORENCE AVE.-LEFFINGWELL RD.	24	11	21	2	8	5	16	10	11	2	6	1	12	11	12	11	12	2	2	1
115	MANCHESTER AVE.-FIRESTONE BLVD.	38	13	30	12	9	13	13	13	13	3	3	8	2	9	10	9	10	3	3	1
117	CENTURY BLVD.-TWEEDY BLVD.-RANCHO LOS AMIGOS	15	11	15	3	1	1	10	10	13	2	1	10	2	8	11	8	11	3	3	1
119	108TH ST. - MANHATTAN BEACH BLVD.	6	2	6	3	3	3	7	6	7	1	1	3	3	5	6	5	6	1	1	1
120	IMPERIAL HWY-AVIATION STATION	10	7	11	1	1	1	3	1	3	2	2	3	2	3	2	3	2	2	2	1
124	EL SEGUNDO BLVD.-SANTA FE AVE.	4	3	4	3	3	3	18	13	13	2	5	5	15	13	14	13	14	2	2	1
127	COMPTON BLVD-BELFLOWER BLVD.	37	16	35	2	13	9	18	13	13	2	5	2	12	10	10	10	10	2	2	1
150	UNIVERSAL-VENTURA-RESEDA-WARNER CTR	32	9	36	6	18	15	10	12	12	5	2	12	10	10	10	10	10	2	2	1
152	FALLBROOK-ROSCOE-VINELAND-BURBANK	11	5	12	2	6	8	2	7	7	6	5	6	5	6	5	6	5	3	3	1
154	TAMPA AVE.-BURBANK BLVD-OXNARD ST	29	10	31	3	9	9	14	8	10	3	6	2	9	9	10	9	10	3	3	1
156	PANORAMA CITY-VAN NUYS-N. HOLLYWOOD	12	3	9	5	5	5	4	2	4	2	2	2	4	2	4	2	4	2	2	1
158	DEVONSHIRE ST.-WOODMAN AVE.	17	3	7	9	9	2	4	2	3	2	2	2	2	2	2	2	2	2	2	1
161	WESTLAKE-CANOGA PARK	17	3	7	9	9	2	4	2	3	2	2	2	2	2	2	2	2	2	2	1



LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY  
NAME OF LINE AND SCHEDULED VEHICLES

LINE	NAME OF LINE	WEEKDAYS							SATURDAYS							SUNDAYS											
		AM PEAK		BASE		PM PEAK		OWL	AM		PM		AM PEAK		OWL	AM		PM		AM PEAK		OWL	AM		PM		
		4	3	10	4	24	1	8	5	7	10	5	2	5	7	10	6	3	2	4	2	4	7	10	6	3	2
471	PUENTE HILLS MALL-WHITTWOOD CT-BREA MALL																										
484	L.A.-EL MONTE-LA PUENTE-POMONA	24	10	24	4	12	5	17	5	8	5	7	10	5	5	8	5	7	10	6	7	10	1	6	7	10	1
487	LOS ANGELES-PASADENA-ALTADENA	20	5	15	5	5	5	15	4	5	5	5	5	5	5	4	5	5	5	5	5	5	1	5	5	5	1
489	L.A.-HASTINGS RANCH EXPRESS	5	5	5	5	5	5	5	4	5	5	5	5	5	5	4	5	5	5	5	5	5	1	5	5	5	1
490	L.A.-EL MONTE-COVINA-BREA	20	8	20	8	10	4	10	7	6	5	5	5	5	5	7	6	5	5	5	5	5	1	6	7	7	3
576	W. HOLLYWOOD - SAN PEDRO EXPRESS	10	4	10	5	5	5	10	3	2	1	6	7	7	7	1	6	7	7	7	7	7	3	6	7	8	3
611	SOUTH LOS ANGELES-PACIFIC PALISADES EXP.	5	5	5	5	5	5	5	3	2	6	6	6	6	6	6	6	6	6	6	6	6	1	6	6	6	1
612	HUNTINGTON PARK SHUTTLE	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	1	6	6	6	1
620	SOUTH GATE SHUTTLE	1	3	9	3	1	3	9	6	6	6	6	6	6	6	6	6	6	6	6	6	6	1	6	6	6	1
681	HUNTINGTON PARK - WAITTS SHUTTLE	5	2	4	4	5	3	6	2	1	3	3	3	3	3	1	3	3	3	3	3	3	1	3	3	3	1
687	LOS ROBLES SHUTTLE	12	6	11	6	12	6	11	6	7	7	7	7	7	7	6	7	7	7	7	7	7	1	7	7	7	1
711	FLORENCE AVE. RAPID BUS	85	37	78	78	22	7	21	2	3	32	35	39	2	4	4	8	9	9	9	9	2	7	7	7	7	
720	WILSHIRE - WHITTIER METRO RAPID	25	11	26	11	22	7	21	4	4	7	8	9	2	4	4	10	11	11	11	11	2	7	7	7	7	
745	SO. BROADWAY METRO RAPID	33	17	31	17	25	11	26	1	4	10	11	11	11	11	10	11	11	11	11	11	1	9	11	11	11	
750	VENTURA BLVD. METRO RAPID	18	13	20	13	18	13	20	4	4	14	16	16	16	16	14	16	16	16	16	16	1	8	11	11	11	
761	VERMONT AVE. METRO RAPID	51	30	51	30	51	30	51	4	4	8	9	9	9	9	8	9	9	9	9	9	1	4	6	6	6	
801	METRO BLUE LINE	62	36	58	36	62	36	58	24	24	21	30	30	30	21	30	30	30	30	30	30	24	24	24	24	24	
802	METRO RED LINE	20	10	20	10	20	10	20	4	4	10	10	10	10	10	10	10	10	10	10	10	4	7	7	7	7	
803	METRO GREEN LINE																										
801	METRO BLUE LINE	19	10	19	10	19	10	19	9	10	10	10	10	10	9	10	10	10	10	10	10	9	9	9	9	9	
802	METRO RED LINE	12	9	11	9	12	9	11	7	9	9	9	9	9	7	9	9	9	9	9	9	7	7	7	7	7	
803	METRO GREEN LINE	10	5	10	5	10	5	10	2	5	5	5	5	5	2	5	5	5	5	5	5	2	5	5	5	5	

SCHEDULED TRAINS

PREPARED BY SERVICE PERFORMANCE ANALYSIS DEPARTMENT  
EFFECTIVE: JUNE 29, 2003

**LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY  
NAME OF DIVISION AND SCHEDULED PULLOUTS**

DIVISION NUMBER	NAME OF DIVISION	WEEKDAYS			SATURDAYS			SUNDAYS		
		A.M.	P.M.	TOTAL	A.M.	P.M.	TOTAL	A.M.	P.M.	TOTAL
1	CENTRAL CITY	156	87	243	86	17	103	66	18	84
2	CROSSROADS	156	75	231	92	11	103	63	3	66
3	NORTH LOS ANGELES	174	69	243	86	8	94	76	5	81
5	ARTHUR WINSTON	207	104	311	121	6	127	93	6	99
6	VENICE	65	41	106	0	0	0	0	0	0
7	WEST HOLLYWOOD	220	136	356	119	17	136	88	15	103
8	WEST VALLEY	145	78	223	59	8	67	50	8	58
9	SAN GABRIEL VALLEY	159	61	220	79	10	89	69	9	78
10	GATEWAY	220	110	330	144	32	176	121	26	147
11	METRO BLUE LINE	20	8	28	14	0	14	14	0	14
15	EAST VALLEY	209	84	293	102	5	107	82	6	88
18	SOUTH BAY	248	98	346	126	31	157	101	32	133
20	METRO RED LINE	14	4	18	12	0	12	12	0	12
22	METRO GREEN LINE	10	7	17	6	3	9	11	3	14
-TOTALS-		2003	962	2965	1046	148	1194	846	131	977

NOTE - SPECIAL EVENT PULLOUTS AND TEMPORARY SCHEDULE CHANGES NOT INCLUDED.  
WEEKDAY PULLOUTS REFLECT SCHOOL DAY SCHEDULES WHICH OPERATE 3 OR MORE DAYS PER WEEK.

PREPARED BY SERVICE PERFORMANCE ANALYSIS DEPARTMENT  
EFFECTIVE: JUNE 29, 2003

LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY

REPORT NO. 4-24

HOURS AND MILES BY DIVISION

EFFECTIVE: JUNE 29, 2003

DIVISION NUMBER	WEEKDAYS			SATURDAYS			SUNDAYS		
	REVENUE HOURS	NonREVENUE HOURS	NonREVENUE MILES	REVENUE HOURS	NonREVENUE HOURS	NonREVENUE MILES	REVENUE HOURS	NonREVENUE HOURS	NonREVENUE MILES
1	1523.2	176.5	17968.9	1102.9	77.7	13469.1	961.1	52.3	12166.2
2	1563.2	177.2	16986.1	1163.6	76.3	12611.6	831.1	42.2	9366.8
3	1950.4	178.7	22379.2	1226.8	61.0	14237.6	1028.6	53.8	12136.8
5	2165.7	244.5	26852.4	1654.9	90.3	20397.1	1280.5	68.5	15992.8
6	549.0	74.0	6728.2	0	0	0	0	0	0
7	2142.0	249.3	25241.5	1675.6	90.6	20339.4	1197.9	68.8	15338.4
8	1482.4	166.0	21738.7	906.1	40.9	13585.3	756.4	35.1	11560.3
9	1844.7	145.8	25647.3	1104.9	44.7	15483.1	941.4	43.2	13691.1
10	2562.7	233.4	30789.9	2028.8	119.1	25509.5	1785.5	86.8	22601.6
15	2277.7	204.0	31437.1	1458.3	62.1	20702.0	1134.1	48.4	16301.0
18	2966.8	259.1	37290.6	1803.8	111.8	23530.6	1468.7	90.2	20126.8

LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY  
ROUTE NAMES AND ONE-WAY MILEAGE

<u>ROUTE</u>	<u>MILES</u>	<u>ROUTE NAME</u>
2	26.2	SUNSET BL.
4	20.0	SANTA MONICA BL.
10	9.9	MELROSE AV.-VIRGIL AV.-TEMPLE ST.
11	9.9	MELROSE AV.-VERMONT AV.-TEMPLE ST. -BRANCH OF LINE -10-
14	9.7	BEVERLY BL.-WEST ADAMS BL.
16	13.0	W. THIRD ST.
18	14.0	W. SIXTH ST.-WHITTIER BL.
20	17.1	WILSHIRE BL.-U.C.L.A.-SANTA MONICA
21	13.1	WILSHIRE BL.-U.C.L.A. -BRANCH OF LINE -20-
26	9.4	SEVENTH ST.-VIRGIL AV.-FRANKLIN AV.
28	11.9	W. OLYMPIC BL.
30	12.3	W. PICO BL.-E. FIRST ST.-FLORAL DR.
31	12.1	W. PICO BL. - EAST FIRST ST. -BRANCH OF LINE -30-
33	17.3	VENICE BL.
37	9.6	W. ADAMS BL. -BRANCH OF LINE -14-
38	11.0	W. JEFFERSON BL.-CITY TERRACE
40	20.2	HAWTHORNE BL.-L.A.-UNION STA. *DIVISIONS 2-3 EXTRA BOARD QUALIFIED ON ROUTE 40 LOS ANGELES TO HOLLYWOOD PARK ONLY
42	15.2	L.A.-WESTCHESTER-LAX
45	16.7	BROADWAY-MERCURY AV.
46	16.8	BROADWAY-GRIFFIN AV. -BRANCH OF LINE -45-
48	10.8	MAPLE AV.-SOUTH MAIN ST. -BRANCH OF LINE -10-
51	16.7	SAN PEDRO ST. - AVALON BL. - COMPTON BL. -BRANCH OF LINE -26-
52	14.9	SAN PEDRO ST. - AVALON BL. - VICTORIA ST. -BRANCH OF LINE -26-
53	15.7	SOUTH CENTRAL AV.
55	12.7	L.A.-COMPTON AV.-IMPERIAL STA.
60	22.4	LONG BEACH BL.-SANTA FE AV.
65	10.5	WASHINGTON BL.-INDIANA ST.-GAGE AV.
66	12.9	E. OLYMPIC BL.-WEST 8TH ST.
68	19.5	W. WASHINGTON BL. - CHAVEZ AV.
70	15.9	L.A.-EL MONTE VIA GARVEY AV.
71	7.1	CITY TERRACE-CAL STATE L.A. -BRANCH OF LINE -38-
76	16.3	L.A.-EL MONTE VIA VALLEY BL.
78	18.2	L.A.-ALHAMBRA-SOUTH ARCADIA VIA LAS TUNAS DR. *DIVISIONS 1-10 EXTRA BOARD QUALIFIED ON ROUTE 79 LOS ANGELES TO SANTA ANITA ONLY
78		SANTA ANITA ONLY
79	18.8	L.A.-ARCADIA VIA HUNTINGTON DR. -BRANCH OF LINE -78-
81	20.1	FIGUEROA ST.
83	13.6	PASADENA AV.-YORK BL. -BRANCH OF LINE -28-
84	11.4	CYPRESS AV.-EAGLE ROCK BL. -BRANCH OF LINE -28-
85	11.6	VERDUGO RD.-GLENDALE COLLEGE -BRANCH OF LINE -28-
90	29.9	L.A.-SUNLAND-SYLMAR VIA PENNSYLVANIA AV.
91	30.3	L.A.-SUNLAND-SYLMAR VIA LA CRESCENTA AV. -BRANCH OF LINE -90-
92	25.8	L.A.-GLENDALE-BURBANK-SAN FERNANDO VIA GLENDALE BL.
94	29.5	L.A.-SAN FERNANDO
102	9.1	E. JEFFERSON BL.-COLISEUM ST.



LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY  
ROUTE NAMES AND ONE-WAY MILEAGE

<u>ROUTE</u>	<u>MILES</u>	<u>ROUTE NAME</u>
105	21.8	VERNON AV.-LA CIENEGA BL.
107	13.8	54TH ST.-FAIRVIEW BL.-SANTA ANA ST.
108	25.1	SLAUSON AV.
110	21.1	GAGE AV.-CENTINELA AV.-FOX HILLS MALL
111	27.9	LAX-FLORENCE AV.-LEFFINGWELL RD.
115	23.3	MANCHESTER AV.-FIRESTONE BL.
117	17.6	CENTURY BL.-TWEEDY BL.-LAKEWOOD STATION
119	14.4	108TH ST.
120	11.9	IMPERIAL HWY. - WILMINGTON BLUE LINE TO L.A.X.
121	11.6	IMPERIAL HWY. - WILMINGTON BLUE LINE TO NORWALK METROLINK -BRANCH OF LINE -120-
124	15.9	EL SEGUNDO BL.-SANTA FE AV.
126	11.6	YUKON AV.-MANHATTAN BEACH BL. -BRANCH OF LINE -119-
127	15.5	COMPTON BL.-BELLFLOWER BL.
150	18.4	VENTURA BL.-WARNER CENTER-CANOCA PARK
152	33.4	FALLBROOK AV.-ROSCOE BL.-VINELAND AV.-BURBANK
154	28.5	TAMPA AV.-VENTURA BL.-BURBANK BL.-OXNARD ST.
156	19.2	L.A. CITY COLLEGE-VAN NUYS-PANORAMA CITY
158	19.5	DEVONSHIRE ST.-WOODMAN AV.
161	23.5	THOUSAND OAKS-CANOCA PARK
163	26.8	SHERMAN WAY-HOLLYWOOD WAY
164	21.9	VICTORY BL.-BRANCH OF LINE -165-
165	23.0	VANOWEN ST.
166	29.0	NORDHOFF ST. - LANKERSHIM BL.
168	14.9	LASSEN ST.-PAXTON ST.
169	25.9	SATICOY ST.-SUNLAND BL.
170	24.5	HELLMAN AV.-EL MONTE VIA SOUTH EL MONTE
175	5.2	FOUNTAIN AV.-TALMADGE ST.-HYPERION AV.
176	16.8	GLASSELL PK.-HIGHLAND PK.-ALHAMBRA-EL MONTE
180	17.5	HOLLYWOOD-GLENDALE-PASADENA-NORTH LAKE VIA COLORADO BL.
181	18.9	HOLLYWOOD-GLENDALE-PASADENA-S.M.VILLA VIA YOSEMITE DR. -BRANCH OF LINE -180-
183	21.0	MAGNOLIA BL.-KENNETH RD.-E. COLORADO ST. -BRANCH OF LINE -234-
200	6.4	ALVARADO ST.
201	12.0	SILVERLAKE BL.
202	16.3	WILLOWBROOK-COMPTON-WILMINGTON
204	12.7	VERMONT AV.
206	14.2	NORMANDIE AV.
207	18.2	WESTERN AV.-120TH ST.
209	15.6	VAN NESS AV.-ARLINGTON AV.
210	20.0	VINE ST.-CRENSHAW BL.
211	7.7	PRAIRIE AV.
212	14.7	LA BREA AV.
215	10.8	INGLEWOOD AV.-REDONDO BEACH -BRANCH OF LINE -211-
217	10.1	FAIRFAX AV.-HOLLYWOOD
220	21.5	ROBERTSON BL.-CULVER BL.-LAX

LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY  
ROUTE NAMES AND ONE-WAY MILEAGE

ROUTE	MILES	ROUTE NAME
230	11.5	LAUREL CANYON BL.
233	12.0	VAN NUYS BL.
234	15.3	SEPLVEDA BL.-BRAND BL.-SAYRE ST.
236	16.4	BALBOA BL.-SYLMAR
237	20.5	BALBOA BL.-RINALDI ST.-WOODLEY AV.-VAN NUYS -BRANCH OF LINE -236-
239	14.3	WHITE OAK AV.-ZELZAH AV.-RINALDI ST. -BRANCH OF LINE -230-
240	17.9	VENTURA BL.-RESEDA BL. -BRANCH OF LINE -150-
243	18.8	DE SOTO AV.-VENTURA BL.-WINNETKA AV.
245	16.1	TOPANGA CANYON BL.-MULHOLLAND DR.-VALLEY CIRCLE BL.
250	3.0	BOYLE AV.-STATE ST.
251	13.5	SOTO ST.-DALY ST.-SEVILLE AV.-103RD STA.
252	4.4	SOTO ST.-HUNTINGTON DR.
253	4.8	EULID AV.-EVERGREEN AV. -BRANCH OF LINE -250-
255	7.4	GRIFFIN AV.-CO. HOSPITAL-ROWAN AV.
258	11.2	ARIZONA AV.-ALHAMBRA-BRANCH OF LINE -259-
259	14.1	EASTERN AV.-ARIZONA AV.-EMERY PARK
260	27.3	ATLANTIC BL.-FAIR OAKS AVE.
264	15.9	ALTADENA DR.-FOOTHILL BL.-DUARTE RD. -BRANCH OF LINE -267-
265	16.4	PARAMOUNT BL.-PICO RIVERA
267	19.1	TEMPLE CITY BL.-DEL MAR BL.-LINCOLN AV.-ALTADENA DR.-DUARTE
268	19.9	WASHINGTON BL.-BALDWIN AV.
275	17.7	PICO RIVERA-WHITTIER-CERRITOS -BRANCH OF LINE -265-
302	26.2	SUNSET BL. LIMITED - BRANCH OF LINE -2-
304	18.5	SANTA MONICA BL.-UNION STATION -LIMITED -BRANCH OF LINE -4-
305	24.8	CROSTOWN BUS
310	21.5	VINE ST.-CRENSHAW BL. - LIMITED -BRANCH OF LINE -210-
315	19.6	MANCHESTER AV.-FIRESTONE BL. - LIMITED -BRANCH OF LINE -115-
316	13.0	W. THIRD ST. LIMITED -BRANCH OF LINE -16-
328	11.9	W. OLYMPIC BL. LIMITED -BRANCH OF LINE -28-
333	17.2	VENICE BL. LIMITED -BRANCH OF LINE -33-
340	20.2	HAWTHORNE BL.-L.A.-UNION STA. LIMITED -BRANCH OF LINE -40-
350	14.6	SOTO ST. -LIMITED - BRANCH OF LINE -251-
352	17.5	SAN PEDRO ST. - AVALON BL. - VICTORIA ST. -LIMITED -BRANCH OF LINE -26-
357	18.2	WESTERN AV. LIMITED -BRANCH OF LINE -207-
360	23.0	LONG BEACH BL.-SANTA FE AV. -LIMITED -BRANCH OF LINE -60-
361	27.3	ATLANTIC BLVD. -LIMITED -BRANCH OF LINE -260-
362	24.4	TELEGRAPH RD.-PIONEER BL. -LIMITED
370	15.9	GARVEY AV. LIMITED -BRANCH OF LINE -70-
380	18.2	HOLLYWOOD-GLENDALE-PASADENA LIMITED -BRANCH OF LINE -180-
381	20.1	FIGUEROA ST. LIMITED -BRANCH OF LINE -81-
394	25.1	SAN FERNANDO ROAD LIMITED -BRANCH OF LINE -94-
401	15.6	L.A.-PASADENA-NORTH ALLEN EXP. -TEMPORARY PENDING METRO GOLD LINE OPENING
418	18.1	ROSCOE BL.-LAUREL CYN.-NORTH HOLLYWOOD STA. LIMITED
426	17.8	SHERMAN WAY-VICTORY BL.-NORTH HOLLYWOOD STA. LIMITED

LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY

ROUTE NAMES AND ONE-WAY MILEAGE

ROUTE MILES	ROUTE NAME
434	L.A.-SANTA MONICA-MALIBU-TRANCAS EXP.
439	L.A.-LAX-REDONDO BEACH
442	L.A.-HAWTHORNE EXP. -BRANCH OF LINE -40-
444	L.A.-WEST TORRANCE-ROLLING HILLS-RANCHO PALOS VERDES-EXP.
445	L.A.-SAN PEDRO-VIA HARBOR TRANSITWAY-EXP.
446	L.A.-CARSON-WILMINGTON-SAN PEDRO EXP.
447	L.A.-CARSON-WILMINGTON-SAN PEDRO-7TH ST. EXP. -BRANCH OF LINE -446-
460	L.A.-NORWALK-DISNEYLAND VIA 110/105 TRANSITWAYS
471	PUENTE HILLS MALL-WHITWOOD CENTER-BREA MALL
484	L.A.-EL MONTE-LA PUENTE-POMONA EXP.
485	L.A.-ALTADENA VIA LAKE AV.
487	L.A.-SAN GABRIEL-SIERRA MADRE EXP.
489	L.A.-ROSEMEAD-CLEARMANS VIL. EXP.
490	L.A.-EL MONTE-COVINA-DIAMOND BAR-BREA EXP.
491	L.A.-SIERRA MADRE VIA SANTA ANITA AV. EXP. -BRANCH OF LINE -487-
550	SAN PEDRO-WEST HOLLYWOOD EXP.
576	SOUTH L.A.-PACIFIC PALISADES EXP.
611	HUNTINGTON PK.-MAYWOOD-BELL-SO.GATE-WALNUT PK. LOOP
612	HUNTINGTON PK.-SO.GATE-LYNWOOD-WATTS LOOP
620	BOYLE HEIGHTS SHUTTLE
651	@ SHERMAN OAKS-HOLLYWOOD BOWL-PARK-N-RIDE -BRANCH OF LINE -653-
652	@ WEST LOS ANGELES-HOLLYWOOD BOWL-PARK-N-RIDE
653	@ CANOGA PARK-HOLLYWOOD BOWL-PARK-N-RIDE
657	@ TORRANCE-HOLLYWOOD BOWL PARK-N-RIDE
681	HUNTINGTON PK.-WATTS VIA SEVILLE AVE.
686	ALLEN AVE. SHUTTLE -OPENING JULY 27, 2003
687	LOS ROBLES AVE.
711	FLORENCE AV. METRO RAPID
720	WILSHIRE-WHITTIER METRO RAPID
745	BROADWAY METRO RAPID
750	VENTURA BL. METRO RAPID
754	VERMONT AV. METRO RAPID
761	WESTWOOD-VAN NUYS BL. METRO RAPID
801	METRO BLUE LINE
802	METRO RED LINE
803	METRO GREEN LINE
804	METRO GOLD LINE -OPENING JULY 26, 2003

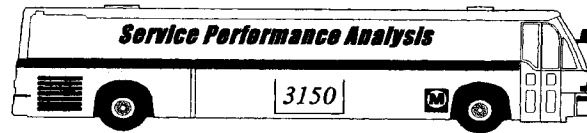
NOTE @ SEASONAL SERVICE (SUMMER)

PREPARED BY SERVICE PERFORMANCE ANALYSIS DEPARTMENT  
EFFECTIVE: JUNE 29, 2003



# APPENDIX 8

## LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY OPERATIONS DEPARTMENT



## SCHEDULED SERVICE OPERATING COST FACTORS REPORT NO. 4-24

FEBRUARY 1, 2004

**FROM:** Jake Satin-Jacobs  
Manager, Service Performance Analysis

**TO:** Ed Muncy  
Director, Service Performance Analysis

**CC:** Roderick Goldman  
Deputy Executive Officer, Service Development

**DATE OF ISSUE:** February 23, 2004

### PURPOSE OF REPORT:

The Scheduled Service Operating Cost Factors Report shows daily vehicle miles, hours, and equipment requirements for scheduled transit service operated by LACMTA, including BDOF but excluding contract (privatized) lines. Revenue hours include layovers but exclude deadheads. Interline savings indicate buses that are used on more than one line. Operating Cost Factors reflect the school day service. Temporary service changes are reported separately. Equipment requirements assume that a bus will not be pulled in and pulled out again during the same peak. Special event service is projected until June 2004. Rail service statistics (supplied by Rail Activation Dept.) are shown both at vehicle and train levels, adjusted to accommodate gap train operation. Rail schedules may be adjusted for maintenance of way. Yard duties are excluded.

### HIGHLIGHTS OF THIS ISSUE:

Lines 250 and 471, and Route 253 were cancelled effective February 1, 2004.  
New Line 710, Crenshaw Rapid, commenced service on February 1, 2004.  
New Routes 312 and 358 Limited (branches of Lines 212 and 108) commenced service on February 1, 2004.  
Line 686 commenced service July 27, 2003.  
Line 804, Metro Gold Line, commenced service July 26, 2003.  
Lines 18, 26, 124, 127, and 720, and Routes 121 and 340 were shortened.

SCHEDULED SERVICE OPERATING COST FACTORS

EFFECTIVE: FEBRUARY 1, 2004

SCHOOL DAY, NON-RACE, NON-BOWL SCHEDULES

SERVICE FREQUENCY	GROSS EQUIPMENT REQUIREMENTS			INTERLINE SAVINGS		VEHICLE HOURS		VEHICLE MILES		
	AM RUSH	DAY BASE	PM RUSH	OWL	AM	PM	TOTAL	REVENUE	TOTAL	REVENUE
BUS	2443	1041	2471	61	474	520	23,182.1	21,019.2	312,049	260,529
	1084	993	1206	61	187	175	14,801.7	14,032.5	197,210	177,752
	775	797	914	61	116	86	11,851.1	11,266.7	162,192	147,330

	149	90	145	4			2,093.5	1,950.6	46,026	45,001
	66	90	92	4			1,502.5	1,434.0	32,462	31,951
	61	92	92	2			1,467.3	1,394.7	31,371	30,855

SCHEDULED TRAIN RUNS

SERVICE FREQUENCY	SCHEDULED TRAIN RUNS			TRAIN HOURS		TRAIN MILES		
	AM RUSH	DAY BASE	PM RUSH	OWL	TOTAL	REVENUE	TOTAL	REVENUE
BUS	49	31	48	2	736.4	688.1	16,260	15,960
	27	31	32	2	588.4	558.3	12,690	12,508
	27	33	32	2	591.1	557.5	12,696	12,508

SPECIAL EVENT SERVICE - SEE NEXT PAGE.

LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY  
 SCHEDULED SERVICE OPERATING COST FACTORS  
 EFFECTIVE: FEBRUARY 1, 2004  
**DAILY EXCEPT SATURDAY AND SUNDAY**  
 SCHOOL DAY, NON-RACE, NON-BOWL SCHEDULES

REPORT NO. 4-24

LINE	DIVISIONS		GROSS EQUIPMENT REQUIREMENTS				INTERLINE SAVINGS		VEHICLE HOURS		VEHICLE MILES	
	7	10	AM RUSH	DAY BASE	PM RUSH	OWL	AM	PM	TOTAL	REVENUE	TOTAL	REVENUE
2	7	10	52	18	49		9	9	514.3	466.0	6523.7	5460.2
4	6	7	72	29	66	7	8	16	666.7	609.6	8011.6	6689.9
10	2	7	35	12	34	1	4	4	316.6	293.7	3517.6	2993.2
14	7		48	15	44	2	11	4	398.3	368.1	4362.9	3927.3
16	1	2	57	14	67		15	20	446.5	399.1	4873.6	4114.2
18	1	2	48	14	45	2	21	21	338.9	307.2	3732.2	3126.7
20	6	10	42	15	51	5	6	6	456.6	401.6	5073.3	3941.4
26	1	2	50	19	44	1	7	1	452.0	400.1	5904.4	4513.0
28	3	9	63	29	67	3	7	13	665.0	591.8	8209.0	6552.9
30	7	10	48	20	51	2	17	11	453.9	415.7	4646.3	3906.7
33	6	10	68	23	68	3	20	16	542.1	502.8	6888.3	6077.4
38	7	10	28	9	29	2	10	12	207.0	194.3	2694.4	2434.4
40	5	10	57	24	60	2	10	14	486.6	427.9	6491.8	4936.0
42	5	10	16	6	11		3	2	113.1	104.9	1356.2	1131.7
45	1	18	26	14	26	2	1	3	294.7	265.7	3668.0	2988.6
53	1	18	28	11	33		4	2	250.9	221.6	3069.6	2413.5
55	1	2	37	10	33	2	11	13	246.3	212.4	3114.6	2356.8
60	1	2	45	21	48	4	1	6	508.2	467.2	6306.9	5054.9
65	2		9	3	6		2	1	67.8	63.5	739.4	652.3
66	1	2	75	14	65		23	33	426.4	362.9	4909.9	3662.0
68	7	10	52	19	52		18	22	363.3	335.0	4275.6	3720.4
70	3	9	33	16	33	2	12	12	285.4	279.6	3682.4	3559.9
76	9		22	13	23	2	5	6	221.4	214.1	2480.5	2311.1
78	3	9	29	14	31		7	6	279.2	261.5	3636.0	3274.7
81	3	18	39	19	41		7	7	399.3	372.1	5116.0	4470.8
90	15		21	8	21		6	8	182.8	168.0	2874.2	2435.0
92	15		29	10	31	2	11	13	243.0	227.1	3277.8	2830.4
94	15		46	19	45		10	13	410.1	375.6	6508.9	5413.4
102	2		3	2	5		1	1	37.3	34.8	429.5	369.6
105	1	2	24	14	26	1	4	1	281.5	268.7	3256.2	2995.1
107	5		3	3	3		1		50.9	50.0	556.5	543.2
108	5		28	13	28		1		297.6	263.4	3924.5	3244.3
110	5		19	9	22		3	1	225.4	200.2	2714.7	2285.6
111	1	5	16	13	18	2	2	3	244.3	225.5	3353.0	2871.3
115	5		29	13	28		2	3	298.8	260.4	4147.5	3214.6
117	18		12	10	11				177.7	167.7	2237.4	1940.4

LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY  
 SCHEDULED SERVICE OPERATING COST FACTORS  
 EFFECTIVE: FEBRUARY 1, 2004

**DAILY EXCEPT SATURDAY AND SUNDAY**  
 SCHOOL DAY, NON-RACE, NON-BOWL SCHEDULES

LINE	DIVISIONS	GROSS EQUIPMENT REQUIREMENTS						INTERLINE SAVINGS		VEHICLE HOURS		VEHICLE MILES	
		AM	RUSH	DAY	BASE	PM	RUSH	OWL	AM	PM	TOTAL	REVENUE	TOTAL
119	18	3					3			33	29	486.7	360.1
120	18	10		6			10			131.4	120.8	1910.3	1579.1
124	18	4		2			5	1	2	37.3	33.8	478.5	380.8
127	18	4		2			2			30.8	29.2	358.4	314.6
150	8	33		16			30	9	3	334.7	313.6	4554.2	4005.7
152	8	34		8			35	13	17	247.2	219.3	3867.3	3086.1
154	8	9		4			11	3	3	77.5	69.7	1272.3	1053.1
156	8	25		10			30	4	11	274.4	249.2	3826.5	3099.5
158	8	10		3			8	4	3	62.3	56.1	958.4	808.4
161	8	15		3			7	6	1	76.4	61.6	1522.5	1069.6
163	8	22		11			25	8	5	230.7	214.2	3279.6	2820.8
165	8	47		20			49	12	14	392.4	346.3	6394.3	5122.0
166	8	40		10			38	12	13	243.8	213.8	4265.1	3327.4
168	8	2		2			3		1	27.6	27.4	439.7	437.7
169	8	10		4			11	5	5	66.6	61.1	989.1	865.6
170	9	5		4			5	1	1	58.7	57.2	685.6	652.0
175	3	6		1			12	2	10	37.2	28.0	413.6	253.9
176	3	3		3			3			45.6	44.7	609.3	590.4
180	3	24		20			30	2	3	361.6	334.8	4768.8	4041.1
200	2	17		9			19	3	2	190.7	180.7	1693.9	1525.4
201	3	5		3			3			48.9	45.9	538.2	480.0
202	18	4		4			4			63.5	61.4	932.3	871.8
204	5	19		14			22			302.0	276.9	3181.2	2749.6
206	3	17		10			26		3	235.8	215.1	2749.0	2331.7
207	5	33		22			40		1	437.7	407.8	5253.2	4510.8
209	5	4		3			5			52.9	49.3	715.9	651.2
210	18	14		11			15	1		216.6	201.8	2764.1	2324.4
211	18	10		3			7	2	3	64.0	55.1	886.0	691.3
212	5	21		10			25		2	234.0	206.2	2764.7	2263.8
217	7	30		11			36	9	11	284.7	257.8	2809.4	2443.5
220	7	4		3			3	1		44.9	42.7	693.5	635.9
230	15	18		6			14	8	3	133.7	123.9	1957.9	1691.2
233	15	12		8			9	4		142.1	135.6	1770.4	1617.0
234	15	24		14			23	1	1	260.4	241.1	3944.0	3397.7
236	8	6		4			10		3	76.2	68.2	1202.1	1001.4
243	8	18		3			15	9	8	82.1	74.0	1249.6	1054.8



LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY  
 SCHEDULED SERVICE OPERATING COST FACTORS  
 EFFECTIVE: FEBRUARY 1, 2004  
**DAILY EXCEPT SATURDAY AND SUNDAY**  
 SCHOOL DAY, NON-RACE, NON-BOWL SCHEDULES

REPORT NO. 4-24

LINE	DIVISIONS	GROSS EQUIPMENT REQUIREMENTS				INTERLINE SAVINGS		VEHICLE HOURS		VEHICLE MILES	
		AM RUSH	DAY BASE	PM RUSH	OWL	AM	PM	TOTAL	REVENUE	TOTAL	REVENUE
245	8	10	3	9		5	5	52.8	49.5	833.4	765.0
251	3 18	28	19	29	1	1	5	333.3	319.4	3642.9	3299.7
252	3	3	2	4		1	1	40.6	38.7	461.7	431.2
255	3	2	2	3		1	1	32.1	31.3	321.9	299.7
259	9	5	4	5				69.8	65.4	938.3	797.1
260	3 9 18	28	16	32		1	2	353.0	316.9	5010.4	3941.6
265	18	4	5	5				67.0	62.7	1040.9	915.7
267	3 9	12	7	15		3	6	122.6	114.1	1771.6	1571.6
268	3 9	12	4	14		3	8	85.1	73.0	1327.7	1001.5
305	7 18	11	8	11				146.5	136.4	2046.5	1821.2
362	1	15	4	8		5		109.9	100.9	1587.6	1305.7
418	8	9		10		3	5	37.0	34.1	580.3	487.7
426	8	9	5	10		6	5	37.1	33.0	650.1	515.2
434	6 10	20	5	19			1	173.3	130.3	4107.3	3030.5
439	18	7	5	8				117.6	108.7	1756.0	1561.7
444	18	18	4	9		3		117.9	100.7	2317.9	1818.0
445	18	4	4	4				56.1	49.3	1317.2	1058.2
446	10 18	18	8	14		5	3	167.7	154.8	2797.7	2440.9
460	1 2	14	11	18				155.2	148.7	2904.4	2706.8
484	9	31	10	31		12	12	236.6	220.3	4533.1	4021.9
485	3 9	14	5	16		4	6	129.1	117.8	1981.9	1735.2
487	3 9	20	5	15		6	2	140.4	126.1	2544.0	2206.3
489	3 9	5	5	5		4	5	13.6	10.3	233.1	159.9
490	9	20	7	19		8	6	158.0	149.4	2868.2	2598.2
550	7 18	10	5	10				126.4	120.1	2576.2	2396.8
576	1	5		5		2	2	31.7	22.0	545.0	313.9
611	2	10	5	8		2	1	87.2	83.4	1012.7	953.7
612	2	5	5	9				90.9	86.1	1212.8	1085.0
620	3 10	3	3	8		5		42.0	40.2	424.1	387.4
681	18	4	2	4				50.4	46.9	543.0	441.0
686	3	4	2	5				52.5	46.3	710.2	508.7
687	9	4	3	5		1		59.8	53.4	781.8	641.3
710	18	16	8	18				175.2	150.9	2842.2	2111.0
711	5	12	6	11				137.9	123.9	1948.4	1611.4
720	1 7 10	87	37	79		3	4	920.9	771.6	13811.6	10542.0
745	1	20	7	23		2	4	176.4	152.0	2560.5	1988.9

LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY  
 SCHEDULED SERVICE OPERATING COST FACTORS  
 EFFECTIVE: FEBRUARY 1, 2004

**DAILY EXCEPT SATURDAY AND SUNDAY**  
 SCHOOL DAY, NON-RACE, NON-BOWL SCHEDULES

LINE	DIVISIONS	GROSS EQUIPMENT REQUIREMENTS				INTERLINE SAVINGS		VEHICLE HOURS		VEHICLE MILES	
		AM RUSH	DAY BASE	PM RUSH	OWL	AM	PM	TOTAL	REVENUE	TOTAL	REVENUE
750	8 15	24	11	25				244.1	208.7	4353.5	3356.9
754	5	33	17	31			345.0	307.9	5200.6	4592.5	
761	15	18	10	19		1	200.3	181.1	3204.6	2588.3	
801	11	51	30	51			656.0	629.1	13843.4	13613.4	
802	20	62	36	58			888.8	806.9	19065.4	18393.3	
803	22	20	10	20	4		285.4	268.2	8104.4	8059.8	
804	21	16	14	16			263.3	246.4	5012.5	4934.1	
<b>SCHEDULED TRAIN RUNS</b>											
LINE	DIVISIONS	AM RUSH	DAY BASE	PM RUSH	OWL	TRAIN HOURS		TRAIN MILES			
		19	10	19		TOTAL	REVENUE	TOTAL	REVENUE		
801	11	19	10	19		243.6	232.4	5155.6	5061.8		
802	20	12	9	11		191.1	174.4	3980.2	3843.7		
803	22	10	5	10	2	158.6	148.3	4406.8	4382.7		
804	21	8	7	8		143.1	133.0	2716.9	2671.5		

ADDITIONAL EQUIPMENT REQUIREMENTS THAT ARE NOT INCLUDED IN THE DATA ON PREVIOUS PAGE

SPECIAL EVENT **APPROXIMATE** SCHEDULED SERVICE AS KNOWN AT THIS TIME (TEMPORARY CHANGES AND LEASE EVENTS NOT INCLUDED)

EVENT/SERVICE	TENTATIVE DATES OF OPERATION	DAYS	NO. DAYS	EQUIPMENT		HOURS		MILES		
				A.M.	BASE P.M.	TOTAL REVENUE	TOTAL REVENUE	TOTAL REVENUE	TOTAL REVENUE	
SANTA ANITA (OAK TREE)	10-1-03 THROUGH 10-10-03	WE,TH,FR	( 6)	0	5	7	33.6	23.6	649	411
SANTA ANITA (OAK TREE)	9-28-03 THROUGH 10-12-03*	SA,SU	( 5)	3	5	12	57.2	38.8	1154	711
* - service suspended due to strike 10-14 to 11-17-03										
SANTA ANITA (WINTER)	12-26-03 THROUGH 4-16-04	WE,TH,FR	(46)	0	5	7	33.6	23.6	649	411
SANTA ANITA (WINTER)	12-27-03 THROUGH 4-18-04	SA,SU	(34)	3	5	12	57.2	38.8	1154	711
SANTA ANITA (WINTER)	12-29-03; 1-1, 1-19, 2-16-04	MO,TH	( 4)	3	5	12	57.2	38.8	1154	711
HOLLYWOOD PARK	4-21-04 THROUGH 7-16-04	WE,TH,FR	(39)	0	4	6	36.8	27.5	548	335
HOLLYWOOD PARK	4-24-04 THROUGH 7-18-04	SA,SU	(26)	0	3	6	36.8	27.6	548	335
HOLLYWOOD PARK	5-31-04	MO	( 1)	0	3	6	36.8	27.5	548	335

LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY  
 SCHEDULED SERVICE OPERATING COST FACTORS  
 EFFECTIVE: FEBRUARY 1, 2004

REPORT NO. 4-24

**SATURDAY ONLY**

SCHOOL HOLIDAY, NON-RACE, NON-BOWL SCHEDULES

LINE	DIVISIONS		GROSS EQUIPMENT REQUIREMENTS				INTERLINE SAVINGS		VEHICLE HOURS		VEHICLE MILES		
	AM	RUSH	DAY	BASE	PM	RUSH	OWL	AM	PM	TOTAL	REVENUE	TOTAL	REVENUE
2	7	10	23	20		29		3	9	293.3	282.6	3628.6	3429.7
4	7	10	42	36		56	7	11	20	550.2	519.7	6608.3	5897.4
10	2	7	16	17		20	1		5	227.6	217.9	2477.8	2233.8
14	7		20	13		15	2	9	2	216.7	207.7	2570.6	2427.5
16	1	2	27	17		28		12	6	273.8	258.5	2954.6	2698.8
18	1	2	25	15		31	2	11	14	275.4	254.4	3004.4	2630.2
20	10		20	15		24	5	3	6	307.0	291.5	3590.2	3293.3
26	1	2	28	30		31	1		2	394.2	372.0	4888.0	4292.7
28	3		22	24		26	3			390.4	369.9	4699.5	4228.9
30	7	10	20	20		31	2	3	8	310.0	294.4	3140.8	2811.1
33	10		27	22		34	3	9	11	350.8	337.2	4462.0	4174.8
38	7	10	11	10		16	2	4	6	115.4	111.5	1502.1	1423.2
40	5	10	26	30		34	2	7	5	379.2	355.7	4684.7	4051.7
42	5	10	8	6		10		2	3	81.8	78.2	959.4	867.4
45	1		12	16		17	2		1	217.7	202.8	2741.6	2332.5
53	1	18	13	13		15		1	3	173.1	165.1	2048.3	1871.0
55	1	2	16	12		14	3	6	3	160.8	142.7	2020.7	1564.5
60	1	2	28	26		32	3	9	6	374.6	345.8	4956.5	3997.3
65	2		2	2		2				28.0	27.2	329.4	311.8
66	1	2	37	16		29		21	11	284.1	253.4	3342.9	2640.1
68	7	10	21	19		28		4	10	238.5	226.5	2863.7	2596.8
70	9		15	16		15	2			217.3	214.0	2759.2	2706.4
76	9		11	12		12	2			171.3	167.4	1985.1	1899.1
78	9		11	12		12				174.7	167.6	2374.2	2229.8
81	3	18	17	18		19				275.5	265.7	3508.0	3261.5
90	15		10	8		8		2		120.3	113.7	1889.6	1689.9
92	15		16	14		17	2	5	2	198.8	191.8	2661.8	2454.4
94	15		20	19		21		3	2	264.7	251.2	4157.2	3721.0
102	2		3	2		2		1		30.6	29.8	377.2	356.0
105	1	2	11	13		15	1	1	2	172.8	167.8	2019.2	1928.9
107	5		2	2		3				35.8	34.8	425.0	410.2
108	5		12	12		14			1	170.5	159.0	2358.0	2048.4
110	5		8	8		8		1		117.7	110.8	1466.2	1343.7
111	1	5	12	13		14	2	1	1	191.8	177.5	2721.0	2344.1
115	5		10	13		13				172.7	162.0	2387.9	2059.6
117	18		11	12		13		1		173.2	163.1	2361.3	2046.6

LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY  
 SCHEDULED SERVICE OPERATING COST FACTORS  
 EFFECTIVE: FEBRUARY 1, 2004

REPORT NO. 4-24

**SATURDAY ONLY**

SCHOOL HOLIDAY, NON-RACE, NON-BOWL SCHEDULES

LINE	DIVISIONS	GROSS EQUIPMENT REQUIREMENTS				INTERLINE SAVINGS		VEHICLE HOURS		VEHICLE MILES	
		AM RUSH	DAY BASE	PM RUSH	OWL	AM	PM	TOTAL	REVENUE	TOTAL	REVENUE
120	18	6	6	7		1		95.5	90.3	1314.2	1140.5
124	18	2	2	2				22.7	21.5	279.7	246.4
150	8	17	12	12	2	4		231.6	225.2	3128.0	2970.9
152	8 15	15	10	12		5	1	149.0	142.0	2119.1	1937.7
154	8 15	8	2	6		6	4	49.1	46.3	896.6	812.2
156	8 15	12	9	9	3	3		179.3	170.6	2455.3	2201.9
158	8	4	2	4		2	2	33.6	31.2	613.8	557.8
161	8	4	2	3		1		32.8	30.0	649.1	550.1
163	8 15	12	11	11		1		165.9	158.2	2221.1	2006.5
165	8 15	22	15	18		7	3	224.8	213.3	3537.8	3199.9
166	8 15	7	7	7				104.9	101.8	1862.7	1771.6
168	8	2	2	2				24.4	23.3	394.6	366.4
180	3	14	20	20	2			267.6	249.7	3443.2	2946.1
200	2	10	11	12		1	1	152.5	146.7	1332.7	1225.7
201	3	2	2	2				28.1	27.1	314.9	292.1
202	18	2	2	2				34.8	33.8	464.1	433.8
204	5 18	12	13	13	4			232.2	220.1	2554.4	2300.0
206	3 5	9	9	9				138.3	133.4	1537.1	1425.0
207	5 18	22	22	23	2			335.1	322.7	3847.6	3529.8
209	5	2	2	2				30.7	29.4	466.9	444.0
210	18	12	13	13				200.1	191.1	2576.6	2280.5
212	5	7	9	10				127.8	122.2	1466.2	1354.8
217	7	15	14	18	2	5	3	185.5	174.7	1884.1	1704.2
220	7	3	3	4			1	38.2	37.0	588.6	562.6
230	15	6	6	6				87.3	83.6	1251.5	1155.0
233	15	5	6	6				97.0	93.7	1241.1	1154.1
234	15	9	9	9				132.9	126.6	2280.8	2093.0
236	8	2	2	2				27.5	26.1	476.4	434.6
243	8	7	4	7		3	3	37.1	36.3	586.7	572.6
245	8	4	2	4		2	2	27.1	26.4	491.8	480.2
251	3 18	12	12	12	1			194.8	188.8	2138.7	1955.9
252	3	2	2	2				25.3	24.6	297.2	284.8
255	3	2	2	2				30.6	30.1	314.6	303.6
260	9 18	14	15	15				217.9	207.3	3089.1	2744.4
267	9	5	5	5				67.9	64.8	1010.4	933.9
268	9	3	3	3				42.3	40.6	607.4	558.6

LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY  
 SCHEDULED SERVICE OPERATING COST FACTORS  
 EFFECTIVE: FEBRUARY 1, 2004

REPORT NO. 4-24

**SATURDAY ONLY**

SCHOOL HOLIDAY, NON-RACE, NON-BOWL SCHEDULES

LINE	DIVISIONS	GROSS EQUIPMENT REQUIREMENTS				INTERLINE SAVINGS		VEHICLE HOURS		VEHICLE MILES	
		AM RUSH	DAY BASE	PM RUSH	OWL	AM	PM	TOTAL	REVENUE	TOTAL	REVENUE
305	7 18	7	8	8	8			108.3	102.5	1575.2	1436.4
362	1	7	7	7	7	2		69.6	65.7	988.3	877.8
434	10	11	3	3	9			99.0	81.1	2610.8	1953.6
439	18	7	3	3	9	4	4	78.3	74.8	1261.6	1161.4
444	18	6	3	3	8	4	5	53.9	50.2	1075.9	981.0
445	18	3	3	3	4			43.9	38.9	988.5	794.2
446	10 18	8	5	5	11	3	4	115.5	110.5	2099.3	1954.0
460	1	9	10	15	15		3	124.8	119.8	2571.2	2444.2
484	9	7	7	7	10	1		116.7	111.1	2334.4	2127.4
485	3	5	5	5	5			85.8	81.8	1353.5	1250.2
487	9	5	5	5	5			74.1	71.9	1211.5	1164.6
490	9	5	5	5	5			73.7	71.9	1312.0	1257.1
550	7 18	6	7	7	7			86.9	82.5	1964.4	1839.3
611	2	6	5	5	5	1		84.9	83.0	959.6	931.6
612	2	5	5	5	5	1		90.4	86.2	1200.9	1085.0
681	18	2	2	2	2			33.6	32.7	367.0	333.0
686	3	2	2	2	2			31.5	29.7	411.8	351.0
687	9	2	2	2	2			44.0	41.0	567.6	489.6
711	5	6	6	6	6			86.3	82.0	1160.3	1045.6
720	7 10	32	36	35	35			521.7	487.3	7671.2	6943.3
745	1	7	8	9	9			103.8	99.0	1407.2	1264.7
750	8 15	9	9	9	9	1		139.2	132.4	2283.7	2081.3
754	5	14	16	16	16			212.1	198.9	3254.9	3013.7
761	15	8	9	9	9			121.4	116.3	1922.3	1768.6
801	11	18	30	30	30			450.8	441.1	9365.7	9250.9
802	20	24	36	36	36			613.1	577.9	13135.9	12827.6
803	22	10	10	10	10	4		197.4	188.7	5506.0	5483.6
804	21	14	14	14	16			241.2	226.3	4453.9	4388.9

LINE	DIVISIONS	SCHEDULED TRAIN RUNS				TRAIN HOURS		TRAIN MILES	
		AM RUSH	DAY BASE	PM RUSH	OWL	TOTAL	REVENUE	TOTAL	REVENUE
801	11	8	10	10		176.8	172.6	3654.2	3608.1
802	20	7	9	9		163.7	153.6	3453.6	3367.5
803	22	5	5	5	2	115.9	110.1	3146.8	3133.8
804	21	7	7	8		132.0	122.0	2435.5	2398.9

LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY  
 SCHEDULED SERVICE OPERATING COST FACTORS  
 EFFECTIVE: FEBRUARY 1, 2004

**SUNDAY ONLY**

SCHOOL HOLIDAY, NON-RACE, NON-BOWL SCHEDULES

LINE	DIVISIONS	GROSS EQUIPMENT REQUIREMENTS				INTERLINE SAVINGS		VEHICLE HOURS		VEHICLE MILES	
		AM RUSH	DAY BASE	PM RUSH	OWL	AM	PM	TOTAL	REVENUE	TOTAL	REVENUE
2	7 10	14	15	18		2	2	206.6	198.0	2611.8	2420.7
4	7 10	22	25	30	7	5	4	412.4	391.4	5107.6	4661.3
10	2 7	8	11	12	1	1	1	151.7	144.9	1791.8	1634.0
14	7	13	14	15	2	3	1	182.8	176.2	2149.3	2049.4
16	1 7	12	13	17		1	1	209.1	200.4	2305.6	2152.6
18	1 2	11	14	16	2		1	230.5	219.8	2668.7	2442.6
20	10	19	15	24	5	5	9	299.4	281.9	3579.4	3229.4
26	1 2	18	21	21	1	2		267.6	251.5	3356.2	2928.6
28	3	18	20	20	3			316.6	301.6	3892.6	3562.2
30	7 10	14	17	18	2	3	1	248.7	236.5	2627.9	2360.5
33	10	22	22	31	3	3	5	295.9	283.8	3893.2	3633.7
38	7 10	9	4	8		6	2	81.9	79.0	1105.0	1043.1
40	5 10 18	18	20	23	2	4	3	262.2	247.4	3331.1	2935.5
42	10 18	4	1	5		3	4	44.2	41.9	533.0	481.3
45	1 18	9	12	14	2	1	1	179.0	166.0	2310.1	1976.3
53	1 18	7	9	9				125.5	122.8	1620.0	1566.3
55	1 2 18	9	7	10	2	4	3	116.7	104.9	1515.7	1227.5
60	1 2 18	14	17	23	4	1	4	263.1	245.3	3542.1	2967.4
65	2	2	2	2				24.0	23.2	284.6	267.0
66	1 2	8	13	15			2	161.5	154.1	1823.6	1646.6
68	7 10	17	13	14		5		164.4	157.3	2102.4	1919.8
70	9	13	14	14	2			192.5	189.1	2504.1	2436.5
76	9	8	10	9	2	1		131.4	127.7	1585.5	1501.9
78	9	10	10	10				146.8	140.6	2136.6	1999.6
81	3 18	12	16	16				219.7	211.2	2867.8	2651.2
90	15	6	5	6		1	1	73.6	70.5	1136.4	1049.9
92	15	16	10	11	2	7	1	154.9	147.5	2194.8	1979.3
94	15	15	16	18		3	2	199.9	191.6	3197.9	2950.5
102	2	2	2	2				28.1	27.4	347.6	329.2
105	1 2 7	8	9	10	1		1	128.0	123.4	1543.8	1459.1
107	5	2	2	2				34.0	33.5	403.2	396.8
108	5	8	10	10				139.4	130.8	2010.0	1771.5
110	5	4	6	6				81.9	78.2	1095.4	1026.9
111	1 5 18	9	11	11	2			167.0	155.7	2448.7	2137.2
115	5	7	9	9				134.6	127.3	2038.4	1810.3
117	18	9	9	9		1		146.0	137.5	2026.5	1774.5

LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY  
 SCHEDULED SERVICE OPERATING COST FACTORS  
 EFFECTIVE: FEBRUARY 1, 2004

**SUNDAY ONLY**

SCHOOL HOLIDAY, NON-RACE, NON-BOWL SCHEDULES

LINE	DIVISIONS	GROSS EQUIPMENT REQUIREMENTS			INTERLINE SAVINGS		VEHICLE HOURS		VEHICLE MILES	
		AM RUSH	DAY BASE	PM RUSH	OWL	AM	PM	TOTAL	REVENUE	TOTAL
120	18	3	5	5			74.9	71.7	1064.2	954.9
124	18	2	2	2			22.7	21.3	286.6	246.4
150	8	16	13	13	2	4	213.4	206.3	3079.6	2904.5
152	8 15	12	9	12	3	3	133.2	125.4	2079.5	1866.8
156	8 15	10	9	9	3	1	171.0	164.0	2335.3	2141.5
158	8	4	2	4	3	2	29.7	27.5	536.6	483.2
161	8	2	2	3	3	1	26.9	25.5	508.0	461.8
163	8 15	10	8	9	9	4	124.7	117.1	1843.4	1629.8
165	8 15	14	12	12	12	2	170.8	162.2	2737.2	2486.7
166	8 15	7	5	10	10	2	84.9	82.4	1499.9	1441.3
180	3	11	17	17	2		234.5	218.7	3065.0	2619.0
200	2	7	8	8			120.9	117.5	1065.4	1006.4
201	3	1	2	2	2		23.1	22.1	266.6	243.0
202	18	2	2	2	4		34.8	33.8	464.1	433.8
204	5 18	10	10	12	12	4	201.0	189.1	2276.8	1986.5
206	3 5	8	8	8	8		120.2	115.5	1415.0	1302.3
207	5 18	13	18	18	2		254.8	245.1	3001.4	2744.9
210	18	9	11	11			167.5	159.9	2213.6	1970.8
212	5	6	6	6	6	1	90.2	86.4	1019.9	945.6
217	7	11	8	10	2	7	139.6	131.3	1453.1	1320.1
220	7	3	3	3	3		38.3	37.3	587.5	562.6
230	15	7	5	7	7	2	79.5	74.9	1149.8	1024.9
233	15	6	6	6	6	3	98.4	95.1	1292.3	1202.3
234	15	10	9	9	9	1	125.4	118.7	2098.2	1894.8
236	8	2	2	2	2		26.2	24.8	455.3	409.8
245	8	3	2	5	5	1	22.9	22.0	415.8	397.2
251	3 18	9	10	10	1	3	158.0	150.7	1809.0	1574.2
252	3	2	2	2	2		25.4	24.7	261.8	249.2
255	3	2	2	2	2		25.0	24.5	255.4	244.4
260	9 18	11	14	14	14		195.3	185.1	2892.7	2575.2
267	9	5	5	5	5		67.9	64.8	1010.4	933.9
268	9	3	3	3	3		39.8	37.7	573.0	508.4
305	7 18	7	8	8	8		108.3	102.5	1575.2	1436.4
362	1	6	3	4	4	3	69.6	66.3	980.4	877.8
434	10	6	3	6	6		62.0	55.8	1506.8	1305.3
439	18	7	6	10	10	1	77.0	73.1	1278.9	1161.9



LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY  
 SCHEDULED SERVICE OPERATING COST FACTORS  
 EFFECTIVE: FEBRUARY 1, 2004

REPORT NO. 4-24

**SUNDAY ONLY**

SCHOOL HOLIDAY, NON-RACE, NON-BOWL SCHEDULES

LINE	DIVISIONS	GROSS EQUIPMENT REQUIREMENTS				INTERLINE SAVINGS		VEHICLE HOURS		VEHICLE MILES	
		AM RUSH	DAY BASE	PM RUSH	OWL	AM	PM	TOTAL	REVENUE	TOTAL	REVENUE
444	18	4	2	7	7	2	5	47.4	45.7	907.2	866.2
445	18	3	3	4	4			43.7	38.7	988.5	794.2
446	10 18	12	10	12	12	5	4	113.6	108.8	2092.5	1949.4
460	1	8	7	9	9	2		122.3	119.0	2512.2	2422.1
484	9	6	7	10	10	1		108.1	102.9	2264.3	2089.5
485	3	5	5	5	5			85.8	81.8	1343.3	1250.2
487	9	6	3	7	7	3	4	53.1	50.5	901.7	841.0
490	9	6	4	6	6	2	2	52.0	50.2	939.2	875.4
550	7 18	6	7	7	7			86.9	82.5	1964.4	1839.3
611	2	6	5	5	5	2		84.6	82.7	960.6	931.6
612	2	6	2	2	2	2		91.7	86.0	1244.1	1085.0
681	18	2	2	2	2			30.8	29.9	331.0	297.0
686	3	2	2	2	2			31.5	29.7	411.0	351.0
687	9	2	3	3	3			42.7	39.7	552.3	474.3
711	5	4	6	6	6			69.6	65.7	962.4	861.0
720	7 10	26	30	34	34			467.7	433.9	6996.4	6237.9
745	1	7	7	7	7			90.9	87.4	1250.2	1151.7
750	8	8	8	9	9			135.9	129.7	2239.0	2064.4
754	5	8	11	11	11			133.4	124.5	2017.5	1852.1
761	15	4	6	6	6			80.1	76.8	1273.3	1169.8
801	11	18	30	30	30			450.8	441.1	9365.7	9250.9
802	20	24	36	36	36			613.1	577.9	13135.9	12827.6
803	22	5	12	10	10	2		162.2	149.4	4415.2	4387.1
804	21	14	14	16	16			241.2	226.3	4453.9	4388.9
801	11	8	10	10	10			176.8	172.6	3654.2	3608.1
802	20	7	9	9	9			163.7	153.6	3453.6	3367.5
803	22	5	7	5	5	2		118.6	109.3	3152.8	3133.8
804	21	7	7	8	8			132.0	122.0	2435.5	2398.9

LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY  
 NAME OF LINE AND SCHEDULED VEHICLES

REPORT NO. 4-24

LINE	NAME OF LINE	WEEKDAYS							SATURDAYS							SUNDAYS								
		AM PEAK		BASE		PM PEAK		OWL	Interline Savings		BASE		PM PEAK		OWL	Interline Savings		BASE		PM PEAK		OWL	Interline Savings	
		AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM
2	SUNSET BLVD. - BEVERLY DR.	52	18	49	7	8	16	42	23	20	29	7	11	20	9	14	15	18	7	5	2			
4	SANTA MONICA BLVD.	72	29	66	7	8	16	42	23	20	29	7	11	20	9	14	15	18	7	5	2			
10	MELROSE-TEMPLE-SAN PEDRO ST	35	12	34	1	4	4	16	16	17	20	1	5	8	11	12	11	12	1	1	1			
14	BEVERLY BLVD.-WEST ADAMS	48	15	44	2	11	4	20	13	15	15	2	9	2	13	14	15	15	2	2	3			
16	WEST THIRD ST.	57	14	67	2	15	20	27	17	28	17	2	12	6	12	13	17	17	2	1	1			
18	W. SIXTH ST.-WHITTIER BLVD.	48	14	45	2	21	21	25	31	31	31	2	11	14	11	14	16	16	2	2	3			
20	WILSHIRE BLVD.-U.C.L.A.-SANTA MONICA	42	15	51	5	6	6	20	15	15	24	5	3	6	19	15	24	24	5	5	5			
26	SEVENTH ST.-VIRGIL AVE.-AVALON BLVD.	50	19	44	1	7	1	28	30	31	31	1	2	18	21	21	21	21	1	2	2			
28	W. OLYMPIC BL.-YORK BL.-EAGLE ROCK BL.	63	29	67	3	7	13	22	22	24	26	3	3	8	18	20	20	20	3	3	3			
30	W. PICO BLVD.-E. FIRST ST.-FLORAL DR.	48	20	51	2	17	11	20	20	31	31	2	3	8	14	17	18	18	2	2	3			
33	VENICE BLVD.	68	23	68	3	20	16	27	27	34	34	3	9	11	22	22	31	31	3	3	3			
38	W. JEFFERSON BLVD.-CITY TERRACE	28	9	29	10	12	11	10	16	16	16	2	4	6	9	4	8	8	2	2	4			
40	HAWTHORNE-LAX-LOS ANGELES	57	24	60	2	10	14	26	26	30	34	2	7	5	18	20	23	23	2	2	4			
42	L.A.-WESTCHESTER-LAX	16	6	11	2	3	2	8	8	10	10	2	2	3	4	1	5	5	2	2	3			
45	BROADWAY-MERCURY AVE.	26	14	26	2	1	3	12	12	16	17	2	1	9	12	14	14	14	2	2	1			
53	CENTRAL AVE.	28	11	23	4	2	13	13	15	15	15	2	1	3	7	9	9	9	2	2	4			
55	L.A.-COMPTON AVE.-IMPERIAL STA.	37	10	33	2	11	13	16	16	12	14	3	6	3	9	7	10	10	2	2	4			
60	LONG BEACH BL.-SANTA FE AVE.	45	21	48	4	1	6	28	28	32	32	3	9	6	14	17	23	23	4	4	1			
65	WASHINGTON BLVD.-INDIANA ST.-GAGE AVE.	9	3	6	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2			
66	EAST OLYMPIC BLVD.-WEST 8TH ST.	75	14	65	23	33	37	16	29	29	29	21	11	8	13	15	15	15	2	2	5			
68	WEST WASHINGTON BLVD. - CHAVEZ AVE.	52	19	52	18	22	21	19	28	28	28	4	4	10	17	13	14	14	2	2	3			
70	LOS ANGELES-EL MONTE VIA GARVEY AVE.	33	16	33	2	12	12	15	16	15	15	2	3	2	13	14	14	14	2	2	1			
76	L.A.-EL MONTE VIA VALLEY BLVD.	22	13	23	2	5	6	11	12	12	12	2	1	8	10	10	10	10	2	2	1			
78	L.A.-ALHAMBRA-SO. ARCADIA-ARCADIA FIGUEROA ST.	29	14	31	7	7	6	11	12	12	12	2	1	10	10	10	10	10	2	2	1			
81	LOS ANGELES-SUNLAND-SYLMAR	39	19	41	4	1	7	17	17	18	19	1	1	12	16	16	16	16	2	2	1			
90	LOS ANGELES-GLENDALE-BURBANK-SAN FERNANDO	21	8	21	6	8	10	8	8	8	8	2	2	6	5	6	6	6	2	2	1			
92	LOS ANGELES-SAN FERNANDO	29	10	31	2	11	13	16	16	14	17	2	5	2	16	10	11	11	2	2	7			
94	E. JEFFERSON BLVD.-COLISEUM ST.	46	19	45	10	13	20	19	21	19	21	3	3	2	15	16	18	18	2	2	3			
102	VERNON AVE.-LA CIENEGA BLVD.	3	2	5	1	1	1	3	3	2	2	2	1	2	2	2	2	2	2	2	2			
105	54TH ST.-FAIRVIEW BLVD.-SANTA ANA ST.	24	14	26	1	4	1	11	13	15	15	1	1	8	9	10	10	10	1	1	1			
107	SLAUSON - EASTERN AVE.	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2			
108	GAGE AVE.-CENTINELA AVE.-FOX HILLS MALL	28	13	28	1	1	12	12	14	14	14	1	1	8	10	10	10	10	2	2	1			
110	LAX-FLORENCE AVE.-LEFFINGWELL RD.	19	9	22	3	1	8	8	8	8	8	1	1	4	6	6	6	6	2	2	3			
111	MANCHESTER AVE.-FIRESTONE BLVD.	16	13	18	2	2	3	10	13	13	13	2	1	9	11	11	11	11	2	2	1			
115	CENTURY BLVD.-TWEEDY BLVD.-RANCHO LOS AMIGOS	29	13	28	2	2	3	10	13	13	13	1	1	7	9	9	9	9	2	2	1			
117	108TH ST. - MANHATTAN BEACH BLVD.	12	10	11	11	11	11	11	11	12	13	1	1	9	9	9	9	9	1	1	1			
119	IMPERIAL HWY-AVIATION STATION	3	3	3	3	3	3	3	3	3	3	1	1	3	3	3	3	3	1	1	1			
120	EL SEGUNDO BLVD.-SANTA FE AVE.	10	6	10	1	2	2	2	2	2	2	1	1	3	5	5	5	5	2	2	2			
124	COMPTON BLVD-BELFLOWER BLVD.	4	2	5	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2			
127	UNIVERSAL-VENTURA-RESEDA-WARNER CTR	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2			
150	FALLBROOK-ROSCOE-VINELAND-BURBANK	33	16	30	2	9	3	17	12	12	12	2	4	16	13	13	13	13	2	2	4			
152	TAMPA AVE.-BURBANK BLVD-OWNARD ST	34	8	35	13	17	15	10	12	10	12	5	5	12	9	12	9	12	2	2	3			
154	PANORAMA CITY-VAN NUYS-N. HOLLYWOOD	9	4	11	3	3	3	8	2	6	6	4	4	10	9	9	9	9	2	2	2			
156	DEVONSHIRE ST.-WOODMAN AVE.	25	10	30	3	4	11	12	9	9	9	3	3	10	9	9	9	9	2	2	2			
158	WESTLAKE-CANOGA PARK	10	3	8	4	3	4	4	2	4	2	2	2	4	2	4	2	4	2	2	2			
161		15	3	7	6	1	4	4	2	2	3	1	1	2	2	2	2	2	2	2	2			



LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY  
NAME OF LINE AND SCHEDULED VEHICLES

REPORT NO. 4-24

LINE	NAME OF LINE	WEEKDAYS												SATURDAYS						SUNDAYS					
		AM PEAK		BASE		PM PEAK		OWL		Interline Savings		AM		PM		AM PEAK		BASE		PM PEAK		OWL		Interline Savi	
485	LOS ANGELES-PASADENA-ALTADENA	14	5	16	4	6	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	3	3	
487	L.A.-SAN GABRIEL-EL MONTE-SIERRA MADRE	20	5	15	6	2	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
489	L.A.-HASTINGS RANCH EXPRESS	5	5	5	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
490	L.A.-EL MONTE-COVINA-BREA	20	7	19	8	6	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
550	W. HOLLYWOOD - SAN PEDRO EXPRESS	10	5	10	8	6	6	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	
576	SOUTH LOS ANGELES-PACIFIC PALISADES EXP.	5	5	5	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
611	HUNTINGTON PARK SHUTTLE	10	5	8	2	1	6	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
612	SOUTH GATE SHUTTLE	5	5	9	2	1	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
620	BOYLE HEIGHTS SHUTTLE	3	3	8	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
681	HUNTINGTON PARK - WATTS SHUTTLE	4	2	4	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
686	PASADENA-ALTADENA SHUTTLE	4	2	5	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
687	LOS ROBLES SHUTTLE	4	3	5	1	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
710	CRENSHAW BLVD RAPID BUS	16	8	18			6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
711	FLORENCE AVE. RAPID BUS	12	6	11																					
720	WILSHIRE - WHITTIER METRO RAPID	87	37	79	3	4	32	36	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	
745	SO BROADWAY METRO RAPID	20	7	23	2	4	7	8	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	
750	VENTURA BLVD. METRO RAPID	24	11	25	2	4	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	
754	VERMONT AVE. METRO RAPID	33	17	31	14	16	14	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	
761	VAN NUYS BLVD. RAPID BUS	18	10	19	1	8	8	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	
801	METRO BLUE LINE	51	30	51			18	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	
802	METRO RED LINE	62	36	58			24	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	
803	METRO GREEN LINE	20	10	20	4		10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
804	METRO GOLD LINE	16	14	16			14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	
801	METRO BLUE LINE	19	10	19	SCHEDULED TRAINS																				
802	METRO RED LINE	12	9	11	8	10	10	8	10	10	10	8	10	10	10	8	10	10	10	10	10	10	8	10	
803	METRO GREEN LINE	10	5	10	7	9	9	7	9	9	9	7	9	9	9	7	9	9	9	9	9	7	9	9	
804	METRO GOLD LINE	8	7	8	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	

PREPARED BY SERVICE PERFORMANCE ANALYSIS DEPARTMENT  
EFFECTIVE: FEBRUARY 1, 2004

**LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY  
NAME OF DIVISION AND SCHEDULED PULLOUTS**

DIVISION NUMBER	NAME OF DIVISION	WEEKDAYS			SATURDAYS			SUNDAYS		
		A.M	P.M	TOTAL	A.M	P.M	TOTAL	A.M	P.M	TOTAL
1	CENTRAL CITY	157	87	244	80	18	98	63	16	79
2	CROSSROADS	156	80	236	90	7	97	65	0	65
3	NORTH LOS ANGELES	170	72	242	85	8	93	74	5	79
5	ARTHUR WINSTON	219	104	323	113	9	122	89	4	93
6	VENICE	65	44	109	0	0	0	0	0	0
7	WEST HOLLYWOOD	222	134	356	121	14	135	89	12	101
8	WEST VALLEY	143	81	224	63	6	69	48	6	54
9	SAN GABRIEL VALLEY	162	64	226	77	7	84	67	7	74
10	GATEWAY	236	122	358	146	39	185	115	30	145
11	METRO BLUE LINE	20	8	28	14	0	14	14	0	14
15	EAST VALLEY	211	86	297	99	5	104	81	2	83
18	SOUTH BAY	237	101	338	138	22	160	109	23	132
20	METRO RED LINE	14	4	18	12	0	12	12	0	12
21	METRO GOLD LINE	9	1	10	8	0	8	8	0	8
22	METRO GREEN LINE	10	7	17	6	3	9	11	3	14
-TOTALS-		2031	995	3026	1052	138	1190	845	108	953

NOTE - SPECIAL EVENT PULLOUTS AND TEMPORARY SCHEDULE CHANGES NOT INCLUDED.  
WEEKDAY PULLOUTS REFLECT SCHOOL DAY SCHEDULES WHICH OPERATE 3 OR MORE DAYS PER WEEK.

PREPARED BY SERVICE PERFORMANCE ANALYSIS DEPARTMENT  
EFFECTIVE: FEBRUARY 1, 2004

LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY

REPORT NO. 4-24

HOURS AND MILES BY DIVISION

EFFECTIVE: FEBRUARY 1, 2004

DIVISION NUMBER	WEEKDAYS			SATURDAYS			SUNDAYS		
	REVENUE HOURS	NonREVENUE HOURS	REVENUE MILES	REVENUE HOURS	NonREVENUE HOURS	REVENUE MILES	REVENUE HOURS	NonREVENUE HOURS	REVENUE MILES
1	1533.3	186.6	18028.2	1056.9	79.6	12946.6	946.4	54.7	12040.0
2	1532.5	173.0	16375.8	1154.2	76.0	12533.6	825.4	43.3	9177.4
3	1914.7	175.5	21855.5	1224.4	60.9	14288.4	1025.9	53.3	12218.6
5	2252.5	256.0	27342.6	1558.1	89.1	19262.0	1199.2	64.3	15179.6
6	548.9	74.6	6730.1	0	0	0	0	0	0
7	2197.8	248.0	25243.3	1644.4	82.0	19244.6	1218.7	62.1	14932.9
8	1452.6	172.3	21075.8	937.5	46.4	14063.2	739.0	37.3	11427.7
9	1909.4	139.6	26323.3	1068.5	40.7	14917.3	904.3	38.8	13065.3
10	2538.7	265.0	30351.1	2051.7	119.8	26006.8	1710.3	91.4	22130.1
15	2299.8	210.7	31774.1	1402.9	62.3	19916.5	1123.1	52.3	16130.8
18	2839.6	261.9	35431.8	1935.0	112.4	24574.9	1574.5	87.5	21028.8

LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY  
ROUTE NAMES AND ONE-WAY MILEAGE

ROUTE	MILES	ROUTE NAME
2	26.2	SUNSET BL.
4	20.0	SANTA MONICA BL.
10	9.9	MELROSE AV.-VIRGIL AV.-TEMPLE ST.
11	9.9	MELROSE AV.-VERMONT AV.-TEMPLE ST. -BRANCH OF LINE -10-
14	9.7	BEVERLY BL.-WEST ADAMS BL.
16	13.0	W. THIRD ST.
18	13.0	W. SIXTH ST.-WHITTIER BL.
20	17.1	WILSHIRE BL.-U.C.L.A.-SANTA MONICA
21	13.1	WILSHIRE BL.-U.C.L.A. -BRANCH OF LINE -20-
26	8.4	SEVENTH ST.-VIRGIL AV.-FRANKLIN AV.
28	11.9	W. OLYMPIC BL.
30	12.3	W. PICO BL.-E. FIRST ST.-FLORAL DR.
31	12.1	W. PICO BL. - EAST FIRST ST. -BRANCH OF LINE -30-
33	17.3	VENICE BL.
37	9.6	W. ADAMS BL. -BRANCH OF LINE -14-
38	11.0	W. JEFFERSON BL.-CITY TERRACE
40	20.2	HAWTHORNE BL.-L.A.-UNION STA. *DIVISIONS 2-3 EXTRA BOARD QUALIFIED ON ROUTE 40 LOS ANGELES TO HOLLYWOOD PARK ONLY
42	15.2	L.A.-WESTCHESTER-LAX
45	16.7	BROADWAY-MERCURY AV.
46	16.8	BROADWAY-GRIFFIN AV. -BRANCH OF LINE -45-
48	10.8	MAPLE AV.-SOUTH MAIN ST. -BRANCH OF LINE -10-
51	16.7	SAN PEDRO ST. - AVALON BL. - COMPTON BL. -BRANCH OF LINE -26-
52	14.9	SAN PEDRO ST. - AVALON BL. - VICTORIA ST. -BRANCH OF LINE -26-
53	15.7	SOUTH CENTRAL AV.
55	12.7	L.A.-COMPTON AV.-IMPERIAL STA.
60	22.9	LONG BEACH BL.-SANTA FE AV.
65	10.5	WASHINGTON BL.-INDIANA ST.-GAGE AV.
66	12.9	E. OLYMPIC BL.-WEST 8TH ST.
68	19.5	W. WASHINGTON BL. - CHAVEZ AV.
70	15.9	L.A.-EL MONTE VIA GARVEY AV.
71	7.1	CITY TERRACE-CAL STATE L.A. -BRANCH OF LINE -38-
76	16.3	L.A.-EL MONTE VIA VALLEY BL.
78	18.2	L.A.-ALHAMBRA-SOUTH ARCADIA VIA LAS TUNAS DR. *DIVISIONS 1-10 EXTRA BOARD QUALIFIED ON ROUTE 79 LOS ANGELES TO SANTA ANITA ONLY
79	18.8	L.A.-ARCADIA VIA HUNTINGTON DR. -BRANCH OF LINE -78-
81	20.1	FIGUEROA ST.
83	13.6	PASADENA AV.-YORK BL. -BRANCH OF LINE -28-
84	11.4	CYPRESS AV.-EAGLE ROCK BL. -BRANCH OF LINE -28-
85	11.6	VERDUGO RD.-GLENDALE COLLEGE -BRANCH OF LINE -28-
90	29.9	L.A.-SUNLAND-SYLMAR VIA PENNSYLVANIA AV.
91	30.3	L.A.-SUNLAND-SYLMAR VIA LA CRESCENTA AV. -BRANCH OF LINE -90-
92	25.8	L.A.-GLENDALE-BURBANK-SAN FERNANDO VIA GLENDALE BL.
94	29.5	L.A.-SAN FERNANDO
102	9.1	E. JEFFERSON BL.-COLISEUM ST.

LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY

ROUTE NAMES AND ONE-WAY MILEAGE

ROUTE	MILES	ROUTE NAME
105	21.8	VERNON AV.-LA CIENEGA BL.
107	13.8	54TH ST.-FAIRVIEW BL.-SANTA ANA ST.
108	25.1	SIAUSON AV.
110	21.1	GAGE AV.-CENTINELA AV.-FOX HILLS MALL
111	31.3	LAX-FLORENCE AV.-LEFFINGWELL RD.
115	23.3	MANCHESTER AV.-FIRESTONE BL.
117	17.6	CENTURY BL.-TWEEDY BL.-LAKEWOOD STATION
119	14.4	108TH ST.
120	11.9	IMPERIAL HWY. - WILMINGTON BLUE LINE TO L.A.X.
121	8.8	IMPERIAL HWY. - WILMINGTON BLUE LINE TO NORWALK METROLINK -BRANCH OF LINE -120-
124	11.2	EL SEGUNDO BL.-SANTA FE AV.
126	11.6	YUKON AV.-MANHATTAN BEACH BL. -BRANCH OF LINE -119-
127	10.5	COMPTON BL.-BELLFLOWER BL.
150	18.4	VENTURA BL.-WARNER CENTER-CANOGA PARK
152	33.4	FALLBROOK AV.-ROSCOE BL.-VINELAND AV.-BURBANK
154	28.5	TAMPA AV.-VENTURA BL.-BURBANK BL.-OXNARD ST.
156	19.2	L.A. CITY COLLEGE-VAN NUYS-PANORAMA CITY
158	19.5	DEVONSHIRE ST.-WOODMAN AV.
161	23.5	THOUSAND OAKS-CANOGA PARK
163	26.8	SHERMAN WAY-HOLLYWOOD WAY
164	21.9	VICTORY BL.-BRANCH OF LINE -165-
165	23.0	VANOWEN ST.
166	29.0	NORDHOFF ST. - LANKERSHIM BL.
168	14.9	LASSEN ST.-PAXTON ST.
169	25.9	SATICOY ST.-SUNLAND BL.
170	24.5	HELLMAN AV.-EL MONTE VIA SOUTH EL MONTE
175	5.2	FOUNTAIN AV.-TALMADGE ST.-HYPERION AV.
176	16.8	GLASSELL PK.-HIGHLAND PK.-ALHAMBRA-EL MONTE
180	17.5	HOLLYWOOD-GLENDALE-PASADENA-NORTH LAKE VIA COLORADO BL.
181	18.9	HOLLYWOOD-GLENDALE-PASADENA-S.M.VILLA VIA YOSEMITE DR. -BRANCH OF LINE -180-
183	21.0	MAGNOLIA BL.-KENNETH RD.-E. COLORADO ST. -BRANCH OF LINE -234-
200	6.4	ALVARADO ST.
201	12.0	SILVERLAKE BL.
202	16.3	WILLOWBROOK-COMPTON-WILMINGTON
204	12.7	VERMONT AV.
206	14.2	NORMANDIE AV.
207	18.2	WESTERN AV.-120TH ST.
209	15.6	VAN NESS AV.-ARLINGTON AV.
210	20.0	VINE ST.-CRENSHAW BL.
211	7.7	PRAIRIE AV.
212	14.7	LA BREA AV.
215	10.8	INGLEWOOD AV.-REDONDO BEACH -BRANCH OF LINE -211-
217	10.1	FAIRFAX AV.-HOLLYWOOD
220	21.5	ROBERTSON BL.-CULVER BL.-LAX



LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY  
ROUTE NAMES AND ONE-WAY MILEAGE

<u>ROUTE</u>	<u>MILES</u>	<u>ROUTE NAME</u>
230	11.5	LAUREL CANYON BL.
233	12.0	VAN NUYS BL.
234	15.3	SEPULVEDA BL.-BRAND BL.-SAYRE ST.
236	16.4	BALBOA BL.-SYLMAR
237	20.5	BALBOA BL.-RINALDI ST.-WOODLEY AV.-VAN NUYS -BRANCH OF LINE -236-
239	14.3	WHITE OAK AV.-ZELZAH AV.-RINALDI ST.-BRANCH OF LINE -230-
240	17.9	VENTURA BL.-RESEDA BL.-BRANCH OF LINE -150-
243	18.8	DE SOTO AV.-VENTURA BL.-WINNETKA AV.
245	16.1	TOPANGA CANYON BL.-MULHOLLAND DR.-VALLEY CIRCLE BL.
251	13.5	SOTO ST.-DALY ST.-SEVILLE AV.-103RD STA.
252	4.4	SOTO ST.-HUNTINGTON DR.
255	7.4	GRIFFIN AV.-CO. HOSPITAL-ROWAN AV.
258	11.2	ARIZONA AV.-ALHAMBRA-BRANCH OF LINE -259-
259	14.1	EASTERN AV.-ARIZONA AV.-EMERY PARK
260	27.3	ATLANTIC BL.-FAIR OAKS AVE.
264	15.9	ALTADENA DR.-FOOTHILL BL.-DUARTE RD.-BRANCH OF LINE -267-
265	16.4	PARAMOUNT BL.-PICO RIVERA
267	19.1	TEMPLE CITY BL.-DEL MAR BL.-LINCOLN AV.-ALTADENA DR.-DUARTE
268	19.9	WASHINGTON BL.-BALDWIN AV.
275	17.7	PICO RIVERA-WHITTIER-CERRITOS -BRANCH OF LINE -265-
302	26.2	SUNSET BL. LIMITED - BRANCH OF LINE -2-
304	18.5	SANTA MONICA BL.-UNION STATION -LIMITED -BRANCH OF LINE -4-
305	24.8	CROSTOWN BUS
310	21.5	VINE ST.-CRENSHAW BL. - LIMITED -BRANCH OF LINE -210-
312	14.7	LA BREA AVE. LIMITED -BRANCH OF LINE -212-
315	19.6	MANCHESTER AV.-FIRESTONE BL. - LIMITED -BRANCH OF LINE -115-
316	13.0	W. THIRD ST. LIMITED -BRANCH OF LINE -16-
328	11.9	W. OLYMPIC BL. LIMITED -BRANCH OF LINE -28-
333	17.2	VENICE BL. LIMITED -BRANCH OF LINE -33-
340	18.0	HAWTHORNE BL.-L.A.-UNION STA. LIMITED -BRANCH OF LINE -40-
350	14.6	SOTO ST. -LIMITED - BRANCH OF LINE -251-
352	17.5	SAN PEDRO ST. - AVALON BL. - VICTORIA ST. -LIMITED -BRANCH OF LINE -26-
357	18.2	WESTERN AV. LIMITED -BRANCH OF LINE -207-
358	24.9	SLAUSON AV. LIMITED -BRANCH OF LINE -108-
360	23.0	LONG BEACH BL.-SANTA FE AV. -LIMITED -BRANCH OF LINE -60-
361	27.3	ATLANTIC BLVD. -LIMITED -BRANCH OF LINE -260-
362	24.4	TELEGRAPH RD.-PIONEER BL. -LIMITED
370	15.9	GARVEY AV. LIMITED -BRANCH OF LINE -70-
380	18.2	HOLLYWOOD-GLENDALE-PASADENA LIMITED -BRANCH OF LINE -180-
381	20.1	FIGUEROA ST. LIMITED -BRANCH OF LINE -81-
394	25.1	SAN FERNANDO ROAD LIMITED -BRANCH OF LINE -94-
401	15.6	L.A.-PASADENA-NORTH ALLEN EXP. -TEMPORARY PENDING METRO GOLD LINE OPENING
418	18.1	ROSCOE BL.-LAUREL CYN.-NORTH HOLLYWOOD STA. LIMITED
426	17.8	SHERMAN WAY-VICTORY BL.-NORTH HOLLYWOOD STA. LIMITED

METROPOLITAN TRANSPORTATION AUTHORITY  
STOPS AND ONE-WAY MILEAGE

ALOS VERDES-EXP.

EXP. -BRANCH OF LINE -446-  
TWO-WAY

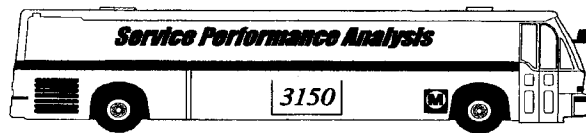
EXP. -BRANCH OF LINE -487-

EXP. PK. LOOP

EXP. -BRANCH OF LINE -653-  
TWO-WAY

# APPENDIX 8

LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY  
OPERATIONS DEPARTMENT



**SCHEDULED SERVICE OPERATING COST FACTORS**  
**REPORT NO. 4-24**  
***CONTRACT LINES***  
**DECEMBER 21, 2003**

**FROM:** Jake Satin-Jacobs  
Manager, Service Performance Analysis

**TO:** Ed Muncy  
Director, Service Performance Analysis

**CC:** Roderick Goldman  
Deputy Executive Officer, Service Development

**DATE OF ISSUE:** January 15, 2004

## **PURPOSE OF REPORT:**

The Scheduled Service Operating Cost Factors Report shows daily vehicle miles, hours, and equipment requirements for scheduled transit service. Revenue hours include layovers but exclude deadheads.

Operating Cost Factors reflect the school day service.

Equipment requirements assume that a bus will not be pulled in and pulled out again during the same peak.

*Contract Lines* are purchased transportation services for which computerized trip scheduling is performed by LACMTA staff. The indicated service levels will remain in effect until further notice.

## **HIGHLIGHTS OF THIS ISSUE:**

Line 58 service via Los Angeles street was cancelled; Saturday and Sunday service were cancelled.

Line 130 service east of La Mirada was cancelled.

Line 177 service northwest of Old Town Pasadena was cancelled.

Line 225 service north of Avenue I was cancelled; Saturday service was cancelled.

Lines 254 and 270 Sunday service was cancelled.

Line 608 Saturday service was cancelled.

Line 626 service was folded into Line 625.

Line 646 was cancelled.

REPORT NO. 4-24  
CONTRACT LINES

LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY  
SCHEDULED SERVICE OPERATING COST FACTORS  
EFFECTIVE DECEMBER 21, 2003

DAILY EXCEPT SATURDAY AND SUNDAY - SCHOOL DAY, NON-RACE, NON-BOWL SCHEDULES

Effective Date	Line Division	AM Peak Buses	Base Buses	PM Peak Buses	Total Hours	Revenue Hours	Total Miles	Revenue Miles	One-way Miles	Line Name
12/21/2003	58 97	4	0	4	46.0	38.3	645.5	406.7	5.4	Alameda Street
12/21/2003	96 98	11	7	10	131.3	122.8	1861.8	1558.2	27.7	Los Angeles - Burbank - Sherman Oaks via Riverside Drive
12/21/2003	125 91	15	8	14	148.0	134.5	2320.2	1869.0	23.5	Rosecrans Ave
12/21/2003	128 91	4	3	3	44.4	42.0	600.7	529.1	14.3	Alondra Blvd
12/21/2003	130 91	11	4	9	112.0	98.7	1669.7	1320.7	23.3	Artesia Blvd
12/21/2003	167 98	10	4	9	102.8	83.2	1927.5	1223.5	21.4	Plummer St - Coldwater Canyon Ave
12/21/2003	177 91	2	2	2	30.2	27.2	461.9	399.5	14.3	Pasadena - Monrovia - Duarte via Foothill Blvd
12/21/2003	205 91	12	6	9	131.8	122.7	2122.9	1837.4	28.4	Willowbrook - Harbor City - San Pedro
12/21/2003	214 91	4	0	4	30.4	27.5	528.9	447.3	10.7	South Broadway / Main Loop - Artesia Transit Center
12/21/2003	218 94	6	3	6	64.0	54.7	925.5	682.5	9.0	Cedars-Sinai Medical Center - Laurel Canyon Blvd
12/21/2003	225 91	2	0	3	26.1	17.7	607.1	335.1	16.0	Palos Verdes Peninsula
12/21/2003	232 91	16	8	17	195.2	169.5	3123.6	2376.2	24.8	Long Beach - L.A.X. via Sepulveda Blvd
12/21/2003	254 91	4	3	4	52.6	49.6	663.7	578.0	17.0	Willowbrook - Huntington Park - Lorena St - City Terrace
12/21/2003	256 91	6	5	5	90.1	81.9	1316.5	1049.0	23.0	Eastern Ave - Avenue 64 - Hill Ave
12/21/2003	266 91	7	5	5	101.0	88.9	1574.9	1218.0	22.4	Rosemead Blvd - Lakewood Blvd
12/21/2003	270 91	5	4	6	78.4	71.5	1152.3	898.8	23.9	Monrovia - El Monte - Norwalk
12/21/2003	603 94	9	7	9	126.2	120.2	1408.0	1269.4	11.7	Rampart Blvd - Hoover St - Colorado St
12/21/2003	605 *94	4	2	4	42.6	39.9	485.5	416.6	5.2	Grande Vista Ave USC Hospital Shuttle
12/21/2003	608 94	1	1	1	12.5	11.9	138.0	138.0	11.5	Crenshaw Connection
12/21/2003	625 93	5	0	5	44.6	37.8	752.4	534.8	18.6	Green Line Shuttle World Way West
12/21/2003	626				CANCELLED					Green Line Shuttle Sepulveda
12/21/2003	646				CANCELLED					San Pedro Owl

TOTAL 138 72 129 1610.3 1440.5 24286.6 19087.8

PULLOUTS

Division	AM	PM	TOTAL
91	86	34	120
93	5	5	10
94	20	7	27
97	4	4	8
98	21	8	29

Annex 8 Permit No 121 Effective 12-21-03 Contract Lines  
Buses reflect block assignments; intgrline serving city not available

LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY  
 SCHEDULED SERVICE OPERATING COST FACTORS  
**EFFECTIVE DECEMBER 21, 2003**

**REPORT NO. 4-24  
 CONTRACT LINES**

**SATURDAY - SCHOOL HOLIDAY, NON-RACE, NON-BOWL SCHEDULES**

Effective Date	Line	Division	AM Peak Buses	Base Buses	PM Peak Buses	Total Hours	Total Revenue	Total Miles	One-way Miles	Line Name
12/21/2003	58	98	7	7	7	94.7	90.5	1390.1	1221.5	26.2
12/21/2003	96	91	6	7	7	97.3	92.2	1477.8	1313.2	23.5
12/21/2003	125	91	3	3	3	45.3	42.8	727.1	660.5	23.3
12/21/2003	130	98	3	3	3	56.0	52.1	913.1	757.1	21.4
12/21/2003	167	91	4	4	4	72.7	70.2	1114.2	1035.9	28.4
12/21/2003	205	94	2	2	2	26.7	24.9	390.3	340.1	9.0
12/21/2003	218					CANCELLED				
12/21/2003	225					CANCELLED				
12/21/2003	232	91	6	7	7	104.5	98.3	1699.4	1495.4	24.8
12/21/2003	254	91	3	3	3	41.2	39.3	518.6	458.7	17.0
12/21/2003	256	91	3	3	3	46.8	43.3	762.5	645.4	23.0
12/21/2003	266	91	5	5	5	80.3	71.9	1233.6	992.2	22.4
12/21/2003	270	91	4	4	4	56.5	52.6	802.6	652.3	23.9
12/21/2003	603	94	5	7	7	92.6	89.6	1034.8	967.4	11.7
12/21/2003	605	*94	2	2	2	27.5	26.7	303.5	280.8	5.2
12/21/2003	608					CANCELLED				
12/21/2003	646					CANCELLED				
<b>TOTAL</b>			<b>53</b>	<b>57</b>	<b>57</b>	<b>842.2</b>	<b>794.3</b>	<b>12367.6</b>	<b>10820.5</b>	

Division	PULLOUTS		TOTAL
	AM	PM	
91	36	0	36
93	0	0	0
94	11	0	11
97	0	0	0
98	10	0	10

91 Compton - operated by First Transit  
 93 Gardena - operated by Transportation Concepts  
 94 18th/Georgia - operated by Transportation Concepts  
 97 Paramount - operated by MV Transportation  
 98 Lincoln Heights - operated by First Transit

Appendix 8 Report No 4-24 Effective 12-21-03 Contract Lines  
 Buses reflect block assignments;  
 interline savings are not available.

LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY  
SCHEDULED SERVICE OPERATING COST FACTORS  
EFFECTIVE DECEMBER 21, 2003

**SUNDAY - SCHOOL HOLIDAY, NON-RACE, NON-BOWL SCHEDULES**

Effective Date	Line	Division	AM Peak Buses	Base Buses	PM Peak Buses	Total Hours	Revenue Hours	Total Miles	Revenue Miles	One-way Miles	Line Name	
12/21/2003	58					CANCELLED						Alameda Street - Los Angeles Street
12/21/2003	96	98	4	4	4	55.2	52.9	828.8	735.0	26.2	Los Angeles - Burbank - Sherman Oaks via Riverside Drive	
12/21/2003	125	91	3	3	3	43.3	41.0	728.0	656.6	23.5	Rosecrans Ave	
12/21/2003	130	91	3	3	3	45.4	42.9	727.1	660.5	23.3	Artesia Blvd	
12/21/2003	167	98	3	3	3	56.0	52.1	913.1	757.1	21.4	Plummer St - Coldwater Canyon Ave	
12/21/2003	205	91	4	4	4	72.7	70.2	1114.2	1035.9	28.4	Willowbrook - Harbor City - San Pedro	
12/21/2003	218	94	2	2	2	26.7	24.9	390.3	340.1	9.0	Cedars-Sinai Medical Center - Laurel Canyon Blvd	
12/21/2003	232	91	7	7	7	104.6	98.5	1685.7	1483.1	24.8	Long Beach - L.A.X. via Sepulveda Blvd	
12/21/2003	254					CANCELLED						Willowbrook - Huntington Park - Lorena St - City Terrace
12/21/2003	256	91	3	3	3	47.7	43.7	777.1	648.9	23.0	Eastern Ave - Avenue 64 - Hill Ave	
12/21/2003	266	91	4	5	5	71.5	63.2	1143.7	902.3	22.4	Rosemead Blvd - Lakewood Blvd	
12/21/2003	270					CANCELLED						Monrovia - El Monte - Norwalk
12/21/2003	603	94	4	7	7	89.5	86.5	1011.5	944.1	11.7	Rampart Blvd - Hoover St - Colorado St	
12/21/2003	605	*94	2	2	2	27.5	26.7	303.5	280.8	5.2	Grande Vista Ave USC Hospital Shuttle	
12/21/2003	646					CANCELLED						San Pedro Owl
<b>TOTAL</b>			<b>39</b>	<b>43</b>	<b>43</b>	<b>639.8</b>	<b>602.5</b>	<b>9623.0</b>	<b>8444.4</b>			

PULLOUTS

Division	AM	PM	TOTAL
91	25	0	25
93	0	0	0
94	11	0	11
97	0	0	0
98	7	0	7

Note - \* - Subcontracted to Operation Shuttle

Appendix 8 Report No 4-24 Effective 12-21-03 Contract Lines Buses reflect block assignments; interline savings are not available.

# APPENDIX 9

## Los Angeles County Metropolitan Transportation Authority N/S

### VMS Support Team

#### Distribution of Buses / Number of Buses By Age By Bus Series As of January 1, 2004

Series	Make	Year	Age In Years																	Total	Average Age								
			<1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16			17	18	19	20	21			
1100	NEOPLAN	1987	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	16.5		
12-1502	TMC-CONV/DIESEL	1992	0	0	0	0	0	0	0	0	205	97	0	0	0	0	0	0	0	0	0	0	0	0	0	0	302	10.9	
1970-99	TMC-CONV/DIESEL	1989	0	0	0	0	0	0	0	0	0	0	0	1	29	0	0	0	0	0	0	0	0	0	0	0	30	14.3	
20-2266	TMC-DIESEL	1988	0	0	0	0	0	0	0	0	0	0	0	0	16	136	0	0	0	0	0	0	0	0	0	0	152	15.2	
23-2402	TMC-DIESEL	1989	0	0	0	0	0	0	0	0	0	0	0	25	17	0	0	0	0	0	0	0	0	0	0	0	42	13.9	
27-2764	FLX METRO	1990	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	13.9		
29-2932	FLX METRO	1992	0	0	0	0	0	0	0	0	0	31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31	11.7	
30-3019	NEW FLYER LF	1998	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	5.1	
4400	GMC RTSII	1982	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30	21.0	
45-4695	NEOP CNG HF	95,96	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	196	7.8	
46-4793	NEOP CNG HF	96,97	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	98	6.6	
50-5222	NEW FLYER HF	1999	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	223	3.9	
53-5522	NEW FLYER LF	2000	0	0	220	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	223	2.6	
63-6600	NEOP CNG HF	97,98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	300	5.6	
67-6799	NEOP CNG HF	1999	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	4.5	
70-7214	NABI LF	2000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	215	3.4	
73-7514	NABI LF	2001	0	0	215	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	215	2.4	
76-7949	NABI LF	2001-02	0	349	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	350	1.6	
7980-99	NABI (COMPOSITE)	2003	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	0.3	
9837-55	EL DORADO	2002	15	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34	1.1	
9900	ELD/THMS/GIL/BB	2001	1	0	59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	2.6	
11000	ORION	2001	0	1	66	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	67	2.9	
<b>Total</b>			<b>29</b>	<b>369</b>	<b>561</b>	<b>357</b>	<b>192</b>	<b>269</b>	<b>145</b>	<b>133</b>	<b>59</b>	<b>0</b>	<b>205</b>	<b>128</b>	<b>0</b>	<b>27</b>	<b>62</b>	<b>136</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>23</b>	<b>7</b>	<b>2,706</b>	<b>5.8</b>

VMS / Focus Data





# APPENDIX 10

Los Angeles County Metropolitan Transportation Authority  
Equipment Maintenance Department  
VMS Support Team

Distribution of Buses / Number of Buses By Age By Division / Service Sector  
As of January 1, 2004

Division / Sector	Age In Years																			Total	Average Age				
	<1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18			19	20	21	
1	0	28	105	19	0	0	0	0	0	0	8	20	0	0	0	5	0	0	0	0	0	0	0	185	4.0
2	0	53	96	5	0	0	0	0	0	0	22	5	0	1	0	0	0	0	0	0	0	0	0	182	3.6
<b>Gateway City Sector Total</b>	<b>0</b>	<b>81</b>	<b>201</b>	<b>24</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>30</b>	<b>25</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>367</b>	<b>3.8</b>
6	0	29	6	17	0	0	1	83	10	0	16	9	0	0	2	1	0	0	0	0	0	0	0	174	6.7
15	0	57	39	14	0	0	9	43	48	0	26	6	0	0	1	7	0	0	0	0	0	0	0	250	6.0
<b>San Fernando Valley Sector Total</b>	<b>0</b>	<b>86</b>	<b>45</b>	<b>31</b>	<b>0</b>	<b>10</b>	<b>126</b>	<b>58</b>	<b>0</b>	<b>42</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>424</b>	<b>6.3</b>
3	0	0	39	11	115	0	0	0	0	0	14	9	0	0	0	1	0	0	0	0	0	16	5	210	6.5
9	0	103	14	0	0	0	0	0	0	0	18	27	0	4	10	6	0	0	0	0	5	2	189	6.2	
<b>San Gabriel Valley Sector Total</b>	<b>0</b>	<b>103</b>	<b>53</b>	<b>11</b>	<b>115</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>32</b>	<b>36</b>	<b>0</b>	<b>4</b>	<b>10</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>21</b>	<b>7</b>	<b>399</b>	<b>6.3</b>	
5	5	60	7	129	32	0	0	0	0	0	16	6	0	0	0	0	0	0	0	0	0	0	0	255	3.8
18	0	0	25	0	7	102	111	6	0	0	16	10	0	3	5	6	0	0	0	0	0	0	0	291	6.6
<b>South Bay Sector Total</b>	<b>5</b>	<b>60</b>	<b>32</b>	<b>129</b>	<b>39</b>	<b>102</b>	<b>111</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>32</b>	<b>16</b>	<b>0</b>	<b>3</b>	<b>5</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>546</b>	<b>5.3</b>
6	0	0	0	0	0	20	0	0	0	0	40	13	0	0	6	0	0	0	0	0	0	0	0	79	9.7
7	4	18	46	122	34	0	0	0	0	0	22	8	0	3	1	7	0	0	0	0	0	0	0	265	4.5
10	0	0	34	38	2	146	23	0	1	0	5	6	0	2	14	6	0	0	0	0	0	0	0	277	5.9
<b>Westside / Central Sector Total</b>	<b>4</b>	<b>18</b>	<b>80</b>	<b>160</b>	<b>36</b>	<b>166</b>	<b>23</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>67</b>	<b>27</b>	<b>0</b>	<b>5</b>	<b>21</b>	<b>13</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>621</b>	<b>5.8</b>
<b>All Divisions / Sectors Subtotal</b>	<b>9</b>	<b>348</b>	<b>411</b>	<b>355</b>	<b>190</b>	<b>268</b>	<b>144</b>	<b>132</b>	<b>59</b>	<b>0</b>	<b>203</b>	<b>119</b>	<b>0</b>	<b>13</b>	<b>39</b>	<b>39</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>21</b>	<b>7</b>	<b>2,357</b>	<b>5.5</b>	
<i>First Transit</i>	1	1	119	0	0	0	0	0	0	0	0	0	0	2	1	7	0	0	0	0	0	0	0	131	3.7
<i>MV Transit</i>	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	2.5
<i>Trans Concepts</i>	15	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34	1.1
<i>Leased</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	4	16.5
<b>Active Buses Subtotal</b>	<b>25</b>	<b>368</b>	<b>536</b>	<b>355</b>	<b>190</b>	<b>268</b>	<b>144</b>	<b>132</b>	<b>59</b>	<b>0</b>	<b>203</b>	<b>119</b>	<b>0</b>	<b>15</b>	<b>40</b>	<b>46</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>21</b>	<b>7</b>	<b>2,532</b>	<b>5.4</b>	
<i>Inactive Buses *</i>	4	0	21	0	0	1	0	0	0	0	0	5	0	4	6	46	0	0	0	0	1	0	0	88	11.2
<i>Special Assignment **</i>	0	1	4	2	2	0	1	1	0	0	2	4	0	8	16	44	0	0	0	0	1	0	0	86	13.2
<b>MTA Total Owned Fleet</b>	<b>29</b>	<b>369</b>	<b>561</b>	<b>357</b>	<b>192</b>	<b>269</b>	<b>145</b>	<b>133</b>	<b>59</b>	<b>0</b>	<b>205</b>	<b>128</b>	<b>0</b>	<b>27</b>	<b>62</b>	<b>136</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>23</b>	<b>7</b>	<b>2,706</b>	<b>5.8</b>	

\* Inactive Buses : Pending for Sale, On Sales List, Contingency and Make Ready Buses  
\*\* Special Assignment : Training, ATMS, Mid Life and Paint Buses  
VMS / Focus Data



**METRO 10-YEAR SERVICE FORECAST (FY 2004 - FY 2013)**

**APPENDIX 11**

DESCRIPTION OF MAJOR PLANNED CHANGES	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	Total
<b>D.O. Active Buses</b>											
35-foot buses	18	18	18	18	18	18	18	18	18	18	18
40-foot buses	2023	1972	1832	1738	1686	1516	1545	1486	1375	1102	1102
45-foot buses	0	81	83	83	83	83	83	83	83	83	83
Articulated buses	0	18	186	250	333	416	500	500	500	500	500
High Capacity Bus	0	0	0	0	0	0	0	83	208	458	458
<b>Total D.O. In-Service</b>	<b>2041</b>	<b>2091</b>	<b>2099</b>	<b>2109</b>	<b>2120</b>	<b>2133</b>	<b>2146</b>	<b>2170</b>	<b>2184</b>	<b>2161</b>	
<b>Total Seats In-Service:</b>	<b>81,568</b>	<b>84,372</b>	<b>87,208</b>	<b>89,436</b>	<b>90,987</b>	<b>92,818</b>	<b>94,766</b>	<b>96,722</b>	<b>98,782</b>	<b>100,862</b>	
<b>D.O. Spares</b>											
35-foot buses	4	4	4	4	4	4	4	4	4	4	4
40-foot buses	405	395	367	352	338	324	309	298	275	221	221
45-foot buses	0	17	17	17	17	17	17	17	17	17	17
Articulated buses	0	4	34	50	67	84	100	100	100	100	100
High Capacity Bus	0	0	0	0	0	0	0	17	42	92	92
<b>Total D.O. Spares</b>	<b>409</b>	<b>420</b>	<b>422</b>	<b>423</b>	<b>426</b>	<b>429</b>	<b>430</b>	<b>436</b>	<b>438</b>	<b>434</b>	
<b>Total D.O. Fleet Requirements</b>	<b>2450</b>	<b>2511</b>	<b>2521</b>	<b>2532</b>	<b>2546</b>	<b>2562</b>	<b>2576</b>	<b>2606</b>	<b>2622</b>	<b>2595</b>	
<b>In-Service Buses</b>											
Pending Eval/Sale pending, Make Ready, Other	170	100	100	100	100	100	100	100	100	100	100
<b>Total Inactive Buses</b>	<b>170</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	
<b>Contract Buses</b>											
Owned	171	171	171	171	171	171	171	171	171	171	171
Leased	4	4	4	4	4	4	4	4	4	4	4
<b>Contract Total:</b>	<b>175</b>	<b>175</b>	<b>175</b>	<b>175</b>	<b>175</b>	<b>175</b>	<b>175</b>	<b>175</b>	<b>175</b>	<b>175</b>	
<b>METRO TOTAL OWNED FLEET:</b>	<b>2795</b>	<b>2786</b>	<b>2796</b>	<b>2807</b>	<b>2821</b>	<b>2837</b>	<b>2851</b>	<b>2881</b>	<b>2897</b>	<b>2870</b>	
<b>Bus Procurement Schedule</b>											
NABI 370 Buss Order	16										16
NABI 100-45 Buses	12										12
NABI - Articulated Buses	88										88
NABI - Articulated Buses, Orion 1	30										30
NABI - Articulated Buses, Orion 2											
High Capacity Bus											
Zero Emission Buses											
<b>Total Planned Procured:</b>	<b>28</b>	<b>118</b>	<b>170</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>150</b>	<b>300</b>	
<b>Average Fleet Age (13 Year Replacement Cycle):</b>	<b>6.2</b>	<b>6.7</b>	<b>6.3</b>	<b>6.5</b>	<b>6.7</b>	<b>6.9</b>	<b>7.2</b>	<b>7.7</b>	<b>7.9</b>	<b>7.3</b>	

Seat assumptions:  
 40-foot bus = 40 seats  
 45-foot bus = 46 seats  
 60-foot bus = 57 seats  
 High Capacity bus = 52 seats (hybrid average between 45-foot bus and a 60-foot bus)

Note: Assume that Zero Emission Buses will be some type of high capacity vehicle







# APPENDIX 13

## Los Angeles County Metropolitan Transportation Authority (Metro) Revenue Service Vehicle Maintenance Plan (Bus)

### Policy

It is the policy of the Los Angeles County Metropolitan Transportation Authority (Metro) that its Revenue Service Vehicles (Bus) be operated and maintained safely and effectively using established maintenance practices and procedures as referenced herein.

The Federal Transit Administration (FTA) guidelines require that the grantee (Metro) keep Federally funded equipment and facilities in good operating order and that it has a current maintenance plan. This plan is intended to meet the FTA requirements for *Rolling Stock* as defined in FTA C 9030 1C, *Urbanized Area Formula Program: Grant Application Instructions, October 1, 1998*, and FTA C. 5010. 2C. *Grant Management Guidelines for Grantees, October 1, 1998*.

### Responsibilities

The Operations Maintenance Department has primary fleet maintenance management responsibility. In this capacity the department is responsible for establishing and updating the policy and the maintenance plan, establishing new maintenance procedures and practices, reviewing and modifying existing maintenance procedures and practices, reporting fleet status, and recommending corrective actions to the responsible Service Sectors, (5 Sectors) and Operating Division Maintenance Manager(s).

All supporting departments (identified herein) are responsible for the assigned components of this plan and are required to immediately report any deviations from this plan to the Deputy Executive Officer, Maintenance and Rebuild.

The plan will be reviewed annually and periodically updated as necessary.

Approved: March 19, 2004

Milo Victoria  
Deputy Executive Officer  
Maintenance and Rebuild

Revised: March 19, 2004

## **MAINTENANCE PLAN**

The maintenance plan is intended to preserve and maintain Metro's capital assets (rolling stock) to ensure that all revenue (buses) and non-revenue vehicles are operable in a safe and effective condition, and to establish and identify the reasonable standards and practices necessary to meet this objective.

Supporting this plan are the following departments and the associated responsibilities:

- Regional Rebuild Center (RRC)** - Heavy maintenance and equipment overhaul.
- Division Maintenance** - Routine maintenance and running repair of revenue vehicles.
- Quality Assurance** - Quality control inspection and reporting.
- Warranty Department** - Warranty claim processing and records.
- Maintenance Instruction** - Mechanic training and preventive maintenance schedules.
- Performance Reporting Section**- Vehicle Management System, (VMS) and/or Maintenance and Materiel Management System, (M3) - Vehicle records and asset tracking.
- Vehicle Technology** - Equipment specification, acceptance and delivery.
- Non-Revenue Vehicles** – Routine maintenance of non-revenue vehicles.

There are eleven major components of this maintenance plan:

- Bus Assignment (Active) and Replacement Plan**
- Maintenance Department Organizational Structure**
- Bus Procurement/Inspection Policy**
- Maintenance Directives**
- Preventive Maintenance Program Schedule**
- Personnel Qualification Standards**
- Technical Training Courses**
- Quality Assurance (QA) Inspection Program**
- Bus Warranty Processing Procedures**
- Injury and Illness Prevention (IIP) Program**
- Personal and Protective Equipment (PPE)**

The coordinated application of these components encompasses the maintenance plan

Revised: March 19, 2004



and are included by reference herein.

## **Maintenance Standards and Procedures**

### **Maintenance Standards**

Revenue service vehicles are to be maintained and serviced at regular intervals for optimum performance and reliability during their expected service life. The minimum service standards stipulated by this plan are as follows:

#### **Service Criteria**

- Operators shall perform a pre-trip vehicle inspection to ensure that the vehicle is ready for revenue service operation. The operator will note all vehicle defects (both major and minor) found, and report the defects to the maintenance personnel. Vehicles should not be operated until major defects are cleared. Maintenance personnel will record and file the operator defect reports.
- Operators shall properly fill out a log book as required and retain the last seven log book copies.
- **NO** Vehicles will be operated in revenue service if it has a defect classified as "out of service criteria" as defined by "North American Out of Service Criteria," California Vehicle Code, and California Code of Regulations, Title 13 - Motor Vehicles.
- Vehicle accidents will be reported immediately. Vehicles damaged as a result of an accident will be removed from revenue service and repaired as soon as practicable.

#### **Servicing of Vehicles**

- Vehicles will be fueled and fluids (i.e. oil, coolant) checked daily when used in revenue service.
- Vehicles should be washed (exterior) after each servicing.
- Graffiti will be removed before buses are placed back into revenue service.
- Etched windows and/or window guards are to be replaced as soon as practicable.
- The interiors will be vacuumed and wiped down daily.
- Floors will be mopped as scheduled by division management.

#### **Preventive Maintenance Program (PMP)**

- Preventive maintenance will be performed based on actual vehicle mileage as specified by the preventive maintenance inspection (PMI) schedule.

**Fare Collection**

- Fare collection equipment will be emptied (vaulted) daily.

**ADA Mandate**

- Buses with defective *ADA mandated features* (i.e. wheelchair lifts, wheelchair ramps, and interior securement devices) will not be placed in revenue service.
- Operators will verify operation of ADA mandated equipment prior to the start of revenue service and during the bus pre-trip inspection.

**VMS/M3**

- All vehicle maintenance activities will be recorded using the VMS and/or the M3 to accurately reflect the status of the fleet. Updates should occur at a minimum of twice daily, once in the morning and once in the afternoon.

**Fleet Management**

- Each operating division will have assigned sufficient vehicles to meet its peak scheduled service requirements plus 18%-20% spares. Periodically, additional vehicles may be assigned to specific divisions to support emergency fleet maintenance campaigns. These additions must be approved in advance by the Fleet Manager and will only be used as specified in the special authorization.
- Fleet assignment projections are included in **Appendix A**.

### **Maintenance Procedures**

The Transit Operations Maintenance Department is responsible for plan coordination and implementation at all Service Sectors and operating locations. Division Maintenance Managers, Assistant Managers and Equipment Maintenance Supervisors are responsible for ensuring that maintenance employees at all operating divisions adhere to this maintenance plan. This responsibility includes planning for adequate manpower, supplies and spare parts.

The operating divisions are supported by seven major support units. The Regional Rebuild Center (RRC) supports the divisions by repairing and/or rebuilding major bus components and sub-systems, such as engines and transmissions. The RRC is also responsible for painting buses and major accident repairs. The Facilities (FMD) is responsible for maintaining the existing infrastructure. Non-Revenue Maintenance Department is responsible for repairing support vehicles and equipment. Fleet Management and Support Services is responsible for the assignment of the bus fleet and field service. Maintenance Instruction is responsible for scheduling and implementation of bus maintenance and diagnostic training programs to all maintenance sectors and support departments. The Manpower Section is responsible for the allocation of manpower to all sectors, including the RRC and Non-revenue staff, (mechanics, service attendants, equipment records specialists, general clerks and supervisors) in accordance with the existing Union contracts. The Vehicle Technology and Technical Support group is responsible for the acquisition, acceptance, testing and inspection of new Metro revenue vehicles, division technical support, and warranty.

Organizational charts for a typical operating division and the major maintenance support units are included in **Appendix B**.

Working in coordination, the Operating Divisions, Fleet Management, Quality Assurance, Non-Revenue, Vehicle Technology, Facilities Maintenance, and the Regional Rebuild Center shall adhere to the equipment standards and procedures as outlined below:

#### **Establishing maintenance practices and procedures for new vehicles**

- 1) Vehicle procurement specifications will define vehicle design standards, operating performance criteria and maintainability requirements. The inspection policy for procurement and acceptance of new buses is provided in **Appendix C**.
- 2) During vehicle production and development, the manufacturer, Vehicle Technology, Maintenance Instruction, and Quality Assurance will develop maintenance criteria and processes for the fleet.
- 3) Prior to a fleet entering service, the manufacturer will provide an approved maintenance manual which will serve as the basis for the planned maintenance program within the

VMS/M3. A parts manual with accurate listings of parts and respective part numbers will also be provided.

- 4) Vehicle Technology, Maintenance Instruction, and Quality Assurance will initiate changes in the Planned Maintenance Program and update documentation and procedures as required.

**Established maintenance practices and procedures for existing vehicles**

- 1) Quality Assurance will review existing maintenance plans for effectiveness and conformance with maintenance manuals, regulations, and procedures through periodic division inspection program.
- 2) The Maintenance plan will be revised based on fleet experience, manufacturer recommendations and improved maintenance standards and practices.
- 3) Performance reporting will update VMS/M3 planned maintenance schedules and incorporate changes into the Vehicle Maintenance System.
- 4) Division maintenance management will implement planned changes.
- 5) The Deputy Executive Officer will issue periodic Maintenance Directives as required. (see **Appendix D**)

**Preventive Maintenance Inspection (PMI)**

Preventive Maintenance Inspections (PMI) and the corrective repair of identified defects and malfunctions are the responsibility of the maintenance personnel assigned to the operating divisions. Maintenance Supervisors will schedule inspections on a daily basis and monitor PMP mileage to ensure that inspections are completed within the mileage parameters. Supervisors will monitor the vehicle inspections and are responsible for insuring that the corrective repairs are performed and properly documented.

Preventive maintenance inspections are initially developed for each vehicle type and are scheduled based on actual vehicle hub mileage.

Any vehicle that has a defect classified as "red line" or identified as "out of service" by the North American Out of Service Criteria, California Vehicle Code, 13 C.C.R., will **NOT** be placed in revenue service operation until the identified repairs have been made.

**Appendix E** is the current PMI schedule summary.

## **Personnel Qualification Standards (PQS) and Task Performance Appraisal**

Personnel Qualification Standards (PQS) and Task Performance Appraisal were developed to identify the comprehensive skill set required by the maintenance personnel and can be used as a guide to efficiently and effectively train mechanics on safety, operate and maintain the revenue and non-revenue service vehicles. (Refer to PQS Job Task Performance Appraisal Form in **Appendix F**).

Each operating division should maintain an individual PQS Job Task Performance Appraisal Form for all mechanics assigned to the division to monitor and identify areas where individual mechanics may need qualification.

Mechanics should be "signed off as qualified" when they have regularly and competently *performed* the specific performance standard. The performance should be observed and documented by the responsible Division Maintenance Manager or supervisor. It is recommended that a PQS Job Task Performance Appraisal Form for each employee should be maintained in the employee's personal training file.

## **Job and Task Performance Standards**

As identified in the preventive maintenance schedule, each VMS/M3 job code associated with a maintenance inspection or repair activity, will have a *Job Task and Standard*. These tasks and standards will identify the specific activity to be performed, required tools, supplies and parts, prerequisite tasks (if any), and the normal time required to perform the task.

*Job Tasks and Standards* are developed from the equipment manufacturer maintenance service manual, and from actual maintenance experiences. Maintenance Instruction has responsibility for task and standard development.

It is the responsibility of each division maintenance manager and supervisor to ensure that the task and standards are fully implemented and maintained. Division management must be proactive in ensuring proper training of mechanics on all job tasks. Shift supervisors shall be responsible for implementation of time standards. Shift supervisors must state expectations for completion of tasks at the time of assignment and follow-up to ensure compliance.

The Job Tasks and Standards are included in the Personnel Qualifications Standards section of the Maintenance Plan in **Appendix F**.

### **Technical Training**

Division management is responsible for ensuring proper training of all Maintenance personnel at their location. Technical training will be provided by the Maintenance Instruction Department. Operating divisions will be able to benefit from this training in two ways.

First, through support and leadership provided by the instructors who will reside in the Service Sectors on a rotating basis. Periodically, the instructors will move to a new division and provide the necessary support as well as conduct small group training sessions in the areas of the instructor's expertise. The support will also include instruction on vehicle troubleshooting, overhaul, inspection, and repair. Additionally, the instructors will address emergency needs of the division where they reside.

Second, through centralized training. This type of training will be provided so that several divisions have the opportunity to participate in more comprehensive technical training within larger groups. This training will be more advanced and allow the mechanic to gain more comprehensive knowledge/skill levels in engine overhaul, engine diagnostics, and transmission diagnostics. The centralized courses available to the division maintenance departments are listed in **Appendix G.**

### **Quality Control and Inspection**

The Quality Assurance department will monitor maintenance quality with a comprehensive inspection and reporting program in the following areas: *Simulated California Highway Patrol terminal inspections, bus record retention inspections, brake and safety inspections, and non-conforming bus parts and material inspections.*

Procedures covering the Quality Assurance department inspection program are listed in **Appendix H.**

### **Warranty**

A large portion of the maintenance performed on Metro's new fleet (parts and labor) is covered by a warranty. Warranty is fast becoming another area that the Metro is recovering significant cost.

The Warranty unit monitors repairs that are covered by warranty and tracks this in several ways. The first is through failed parts that are returned to the Warranty Process Center (WPC). These parts, removed from in-service vehicles, are returned to the vendor for reimbursement or replacement. In addition, the labor for a repair is frequently covered by the warranty and the associated cost can be recovered from the vendor. Additional tracking of warranty work is

done utilizing mainframe VMS/M3 System data. The accurate documentation by mechanics for all work performed is critical for Metro to recover warranty savings. Warranty staff utilizes this VMS/M3 data to generate claims for labor, related to repairs of warranted equipment. Finally, manually recorded data from field mechanics as well as the maintenance division is utilized to close any gaps in the computerized data collection.

The Warranty unit also will work with division staff to ensure that all parts covered under warranty are returned to the warranty-processing center (WPC) as they fail. Parts covered by warranty will be properly tagged prior to being shipped from a division so they are easily identifiable when they are taken from stores. This tagging system allows for easy classification when a part is returned to the WPC due to a failure. Data from the original green tag will then be used as the base data for each failed part.

The warranty process is important not only for the immediate direct cost recovery that is generated, but also because failure trends identified through the warranty process often result in a long-term solution that will save maintenance costs for the life of a given vehicle or other equipment. Therefore, it is important that everyone involved, from the mechanic at the division, to the division maintenance manager, warranty process center staff, and management are diligent in ensuring that their part in the process is carried out in a consistent manner. **(Appendix I)**

### **Injury and Illness Prevention**

The health and safety of the maintenance employees is paramount in meeting the objectives of this maintenance plan. The final section of the maintenance plan provides a summary of the Injury and Illness Prevention program. The Injury and Illness Prevention program provides Operations Maintenance with the tools to successfully protect the safety and health of employees. The program is required by the State of California and establishes standardized loss prevention processes. It also identifies employee rights and responsibilities related to injury and illness prevention.

A summary of the Operations Maintenance Department management responsibilities related to the injury and illness prevention program is shown in **Appendix J**.

### **Personal Protective Equipment (PPE)**

The Personal Protective Guide will ensure that employees are adequately protected against Hazardous materials or conditions which those PPE are designed. All Managers, Supervisors and employees are required to use PPE mandated in this program. **Appendix K**

