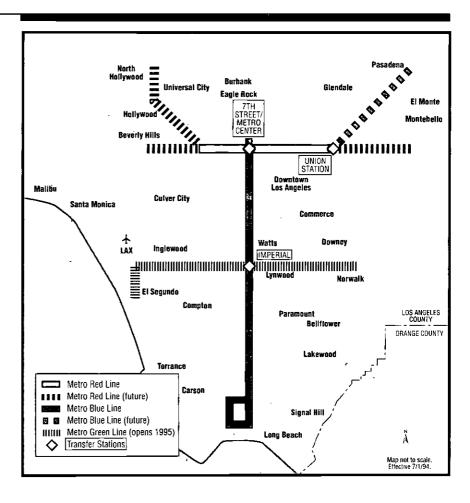
# MTA METRO CONSTRUCTION





# RAIL PROGRAM STATUS SUMMARY

THE LOS ANGELES COUNTY
METROPOLITAN TRANSPORTATION AUTHORITY
RAIL CONSTRUCTION DIVISION



82.6%

#### RAIL PROGRAM STATUS SUMMARY

Metro Pasadena Blue Line

Cost Status (\$000)**Project Progress** 

Original Budget 841,000

Expended to Date 115,125 \* Design (Rebaselined)

Current Budget 997,726 Actual:

Schedule Status: Construction

Revenue Operations Date: Actual: 2%

Original November 1997 Revised June 2002

Metro Green Line (Budget and Forecast excludes North Coast Segment)

**Cost Status Project Progress** (\$000)

671.000 Original Budget

Expended to Date 611,092\* Design

**Current Budget** 717,802 Actual: 100%

Schedule Status Construction

Revenue Operations Date: 97% Actual:

Original October 1994 Forecast May 1995

Metro Red Line Segment 1

**Cost Status** (\$000)**Project Progress** 

Original Budget 1,249,900 Expended to Date 1,396,372\*

Design

Current Budget 100% 1,450,019 Actual:

Schedule Status Construction

Revenue Operations Date: Actual: 100%

Original April 1992 Actual January 1993

Metro Red Line Segment 2

**Cost Status** (\$000)**Project Progress** 

Original Budget 1.446.432 Expended to Date 936,210\*

Design

99% **Current Budget** 1,517,854 Actual:

Construction Schedule Status: Revenue Operations Dates:

Wilshire Vermont/Hlvwd

Jul '96 Sep '98 Original

Mar '99 Forecast Apr '96

Metro Red Line Segment 3 - North Hollywood Extension

(\$000)**Cost Status Project Progress** 

Original Budget 1,310,822 Expended to Date 197,917\*

Design

Actual: 89.5% **Current Budget** 1,310,822

Construction Schedule Status

7.5% Actual: Revenue Operations Date:

Original Mav 2000 **Forecast** September 2000

\*Expenditure data through Apr 1995

52%

Actual:

#### RAIL PROGRAM STATUS SUMMARY

Metro Red Line Segment 3 - Mid-City Extension

Cost Status (\$000) Project Progress

Original Budget 490,663 Suspended for Reassessment

Expended to Date 9,811\* Design

Current Budget 490,663 Actual: 27%

Schedule Status Construction

Revenue Operations Date: Actual: 0%

Original TBD Forecast TBD

Metro Red Line Segment 3 - East Side Extension

Cost Status (\$000) Project Progress

Original Budget 979,601 Suspended for Reassessment

Expended to Date 10,816\* Design

Current Budget 979,601 Actual: 30%

Schedule Status Construction

Revenue Operations Date: Actual: 0%

Original November 2002 Forecast September 2003

Vehicle Acquisition Project\*\*\*

Cost Status (\$000) Project Progress

Original Budget 257,597 Design

Expended to Date 40,725\* Actual: 6%\*\*

Current Budget 257,597 Manufacturéd

Schedule Status: Actual: 6%\*\*

Delivery of Final Cars:

Original November 1997 \*\* Based on Milestone Payments

Forecast November 1999

\* Expenditure data through Apr 1995

# **MAY 1995**

# METROPOLITAN TRANSPORTATION AUTHORITY - CONSTRUCTION DIVISION PROJECT COST REPORT - TOTAL RAIL PROGRAM SUMMARY BY COST ELEMENT

STATUS DATE:

: 05/26/95

#### (IN THOUSANDS)

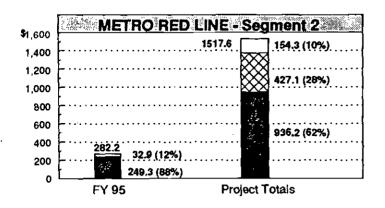
PROJECT: TOTAL RAIL PROGRAM

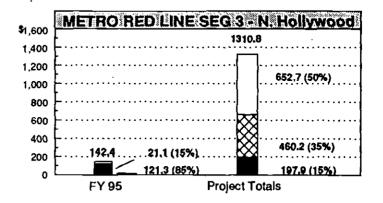
ELEMENT	BUDGET		соммі	TMENTS	INCURR	ED COST	EXPEN	DITURES	CURRENT	VARIANCE
DESCRIPTION	ORIGINAL (1)	CURRENT (2)	PERIOD (3)	TO DATE (4)	PERIOD (5)	TO DATE (6)	PERIOD (7)	TO DATE (8)	FORECAST (9)	(9-2) (10)
T CONSTRUCTION	5,153,508	5,340,891	11,438	3,479,869	18,606	2,444,256	16,397	2,382,512	5,399,148	58,257
S PROFESSIONAL SERVICES	1,685,530	2,028,013	4,890	1,407,904	15,545	1,230,617	15,578	1,238,388	2,062,577	34,564
R REAL ESTATE	480,002	554,472	2,526	369,896	2,614	371,760	2,624	371,698	549,875	(4,597)
F UTILITY/AGENCY FORCE ACCOUNTS	146,280	137,865	(31)	124,306	322	101,442	320	100,922	146,348	8,483
D SPECIAL PROGRAMS	11,044	18,849	(1,242)	5,547	(40)	4,066	(19)	4,099	15,718	(3,131)
C CONTINGENCY	560,118	470,335	o	1	o	1	1	1	371,614	(98,720)
A PROJECT REVENUE	(18,115)	(36,585)	(2)	(1,073)	(117)	(6,946)	(117)	(8,396)	(31,440)	5,145
PROJECT GRAND TOTAL	8,018,366	8,527,931	17,579	5,386,472	36,930	4,145,197	34,783	4,089,226	8,527,934	2

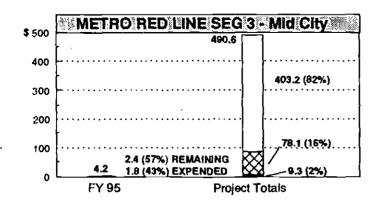
NEW REQUIREMENTS	BUC	GET	СОММІ	TMENTS	INCURR	ED COST	EXPEN	DITURES	CURRENT	VARIANCE
DESCRIPTION	ORIGINAL	CURRENT	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	FORECAST	(9-2)
,	(1)	(2)	(3)	(4)	<u>(5)</u>	(6)	(7)	(8)	(9)	(10)
T CONSTRUCTION	0	52,245	<b>,</b> 3	50,130	2,811.	13,443	7,176	7,938	62,043	9,798
S PROFESSIONAL SERVICES	0	15,875	(357)	17,738	134	9,683	134	9,684	19,817	3,943
R REAL ESTATE	0	0	0	1	. 0	1	o	1	o	o
F UTILITY/AGENCY FORCE ACCOUNTS	0	130	0	0	0	. 0	0	0	0	(130)
D SPECIAL PROGRAMS	0	o	o	20	0	20	0	- 20	. 20	20
C CONTINGENCY	0	2,975	0	0	0	0	o	0	2,089	(886)
A PROJECT REVENUE	0	0	0	0	0	0	o	0	Ō	o
NEW REQ. SUBTOTAL	0	71,224	(353)	67,889	2,945	23,148	7,311	17,644	83,970	12,746
PROJECT GRAND TOTAL	8,018,366	8,599,155	17,227	5,454,361	39,876	4,168,346	42,095	4,106,870	8,611,905	12,749

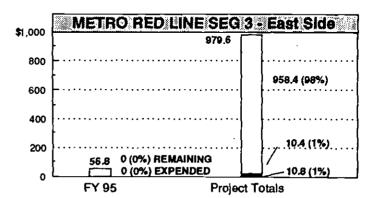
This report includes total project costs for the Metro Blue Line of \$877,271.

#### BUDGET STATUS - May 26, 1995 (in \$ Millions)

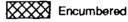






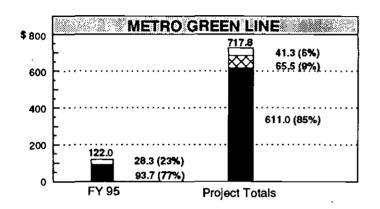


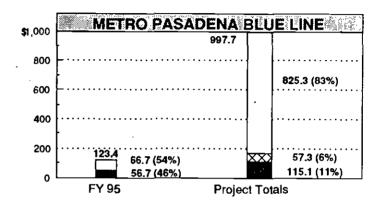
Actual Spent

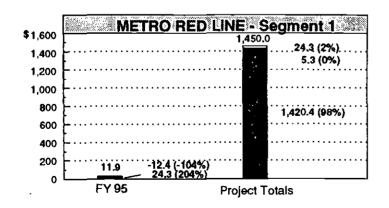


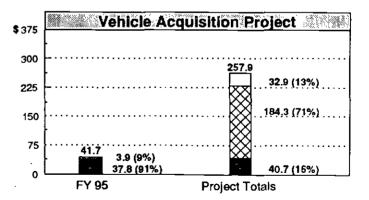
Remaining Budget

### BUDGET STATUS - May 26, 1995 (in \$ Millions)







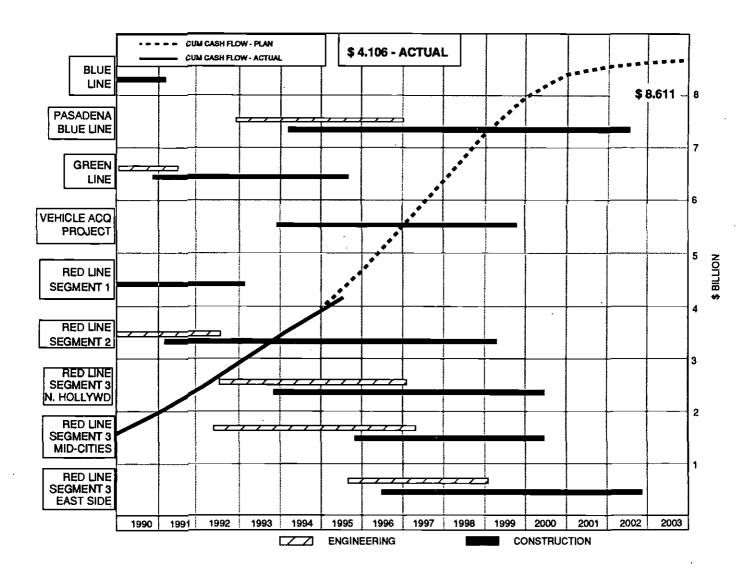


Actual Spent



\_\_\_\_\_ Remaining Budget

Figure 1 - Rail Construction Plan



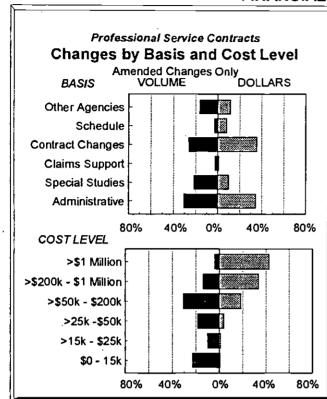
#### METROPOLITAN TRANSPORTATION AUTHORITY FUNDING SOURCES

(IN MILLIONS)

	METRO					GREEN					METRO R		METRO RE						TOTA	AL
	LIN	_	BLUE		LI LI	NE		G 1**	SEC		SEG 3		SEG 3		SEG 3		PRO.		PROG	$\overline{}$
	\$	%	<u> </u>	%	\$	%	\$	%	\$	%	\$	-%	\$	%	<u>     \$                               </u>	%	<u> </u>	%		- %
FTA-SECTION 3						ļ !	605.3	42	667.0	44	681.0	52	242.6	49	492.9	100			2688.8	31
FTA - OTHER					ļ												18.0	7	18.0	o
ISTEA-FED SURFACE TRANSIT PROG						1			54.628	4	109.1	8	138.8	28	169.3	35	84.0	33	555.8	6
FLEXIBLE CONGESTION RELIEF			l '			]														. [
FTA-SECTION 9							90.6	6							i				90.6	1
STATE	1		337.8	34	106.4	15	210.3	15	133.0	9	49,1	4	7.2	1	26.1	5	33.6	13	903.5	11
SB 1995 TRUST FUND			1								75.0	6			I	l			75.0	1
PROPOSITION A	877.2	100			205.1	29	179.5	12	440.3	29									1702.1	20
PROP A/C (TRANSIT ENHANCEMENT)			1	1					62.7	4							] !	]	62.7	1
PROPOSITION C			659.9	66	400.3	56					396.6	30	102,1	21	291.3	59	122.1	47	1972.3	23
PROPIC (AMERICAN DISABILITY ACT)		1	1		5.99	1			5.9	0							f		11.9	ا ا
CITY OF LOS ANGELES			1		1		34,0	2	96.0	6							!		130.0	, 2
BENEFIT ASSESSMENT		l '	1				130.3	9	58.0	4									188.3	2
COST OVERRUN ACCOUNT			1				200.1	14											200.1	2
CITY OF PASADENA				$oxed{oxed}$						$\square$										
TOTAL	877.2	100	997.7	100	717.8	100	1450 1	100	1517.6	100	1310.8	100	490.7	100	979.6	200	257.7	100	8599.1	100

CONSISTS OF LIGHT RAIL LINE (\$847) AND MC-5 WORK (\$30).
 LRT PORTION INCLUDED IN BLUE LINE FORECAST.
 Data current through 12/30/94
 Note: Data reflects current budget.

#### FINANCIAL STATUS



#### CHANGE BASIS ANALYSIS

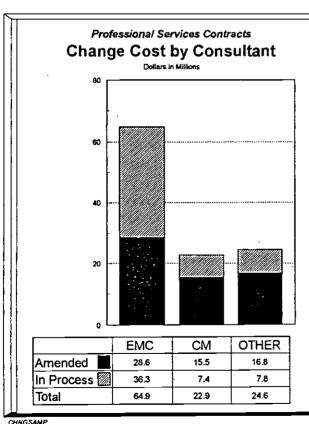
Projectwide approximately 30% of all changes are due to administrative issues, followed closely by changes during the design phase of non-awarded construction contracts at approximately 26%.

Changes due to other agencies at approximately 16% of overall changes are currently being reviewed for potential cost recovery. The cost recovery potential estimate will be reported when the estimate is available.

#### CHANGE COST LEVEL ANALYSIS

Approximately 76% of the total change cost falls within the MTA Board authority level which equates to 18% of the overall change volume.

82% of the change volume falls within the Project Manager's approval authority equating to 24% of the overall change value.



### PROFESSIONAL SERVICES **CHANGE ANALYSIS**

24 Advanced Work Authorization's (AWA) were assigned this period with a total not-to-exceed obligation of \$699k. There were no contract amendments approved this period.

MTA plans to bring the Engineering Management Consultant (EMC) Amendment 6 to Contract Work Order (CWO) #004 and Amendment 7 to CWO #003 before the MTA Board at the June 28, 1995 MTA Board meeting.

**DATA SOURCE:** 

CCS: CCR REPORTS

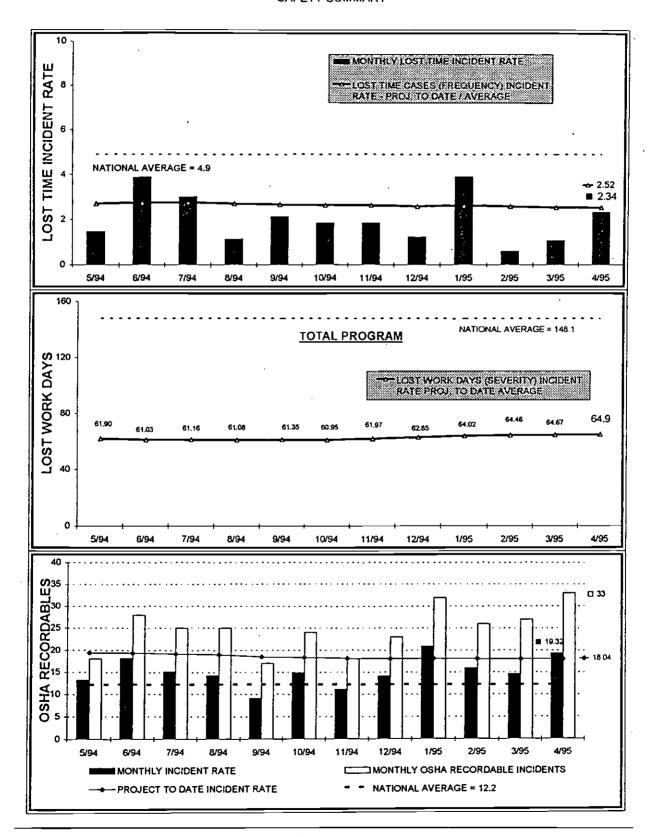
Figure 6 - Cost Performance Relative to Corporate Goals

 THO	10000	~~

	METRO E	LUE LINE	METRO P	ASADENA	METRO GR	REEN LINE	METRO R			RED LINE	METRO		METRO	RED LINE	METRO	REO LINE	VEHICLE A	.cauisiTia	TOTA	N.	COR
				LINE			SEGME		SEGM			NT 3 NH	SEGME			NT 3 ES	PROJE		PROGR	AM	GOA
	DOLLARS	PERCENT	DOLLARS	PERCENT	DOLLARS	PERCENT	DOLLARS	PERCENT	DOLLARS	PERCENT	DOLLARS	PERCENT	DOLLARS	PERCENT	DOLLARS	PERCENT	DOLLARS	PERCENT	DOLLARS	PERCENT	<u> </u>
CONSTRUCTION	657.487	74 95%	593,899	59.54%	490,749	68.40%	812,270	56.11%	1,048,074	69 05%	805,315	61,00%	333,208	67,91%	638,957	65.23%	229,830	89 22%	5,609,790	65.14%	
REAL ESTATE	55,592	6.34%	77,721	7.79%	26,047	3.60%	140,000	9 66%	88,982	5.86%	86,418	7 00%	48,543	9.89%	26,570	2.71%	0	0.00%	549,874	6.39%	
PROFESSIONAL SERVICES:																					
ENGINEERING/DES	69,587	7.93%	93,716	9.39%	83,296	11,60%	221,659	15 29%	154,870	10.20%	83,000	6.00%	36,706	7.48%	94,591	9.66%	1,700	0 66%	839,125	9.74%	
CONSTR MGMT.	91,642	10 45%	76,895	7,71%	75,611	10 50%	116,429	8.03%	140,658	9.27%	103,207	8 00%	35,000	7,13%	79,826	8.15%	0	0 000%	719,268	8.35%	
STAFF	17,655	2.01%	45,372	4.55%	24,179	3.40%	95,558	6.59%	53,222	3.51%	57,676	4 00%	19,627	4 00%	36,588	3.73%	5,335	2.07%	355,213	4.12%	۱.
OTHER	14,222	1.62%	35,977	3,61%	16,684	2.50%	32,671	2 25%	19,701	1.30%	36,459	3 00%	11,647	2.37%	16,630	1.70%	12,469	4.84%	196,460	2 28%	288
SUBTOTAL	193,106	22 01%	251,960	25 25%	199,770	27.83%	466,317	32.16%	368,451	24.27%	280,342	21.18%	102,980	20 99%	227,635	23 24%	19,505	7.57%	2,110,066	24.50%	2
UTILITY/FORCE ACC													0	0 00%	0	0.00%		i	0	0.00%	
CONTINGENCY	963	0 11%	74,145	7.43%	2,499	0 20%	31,432	2,17%	12,645	0.83%	151,293	11.00%	5,932	1,21%	86,439	8.82%	8,262	3.21%	373,612	4.34%	
PROJECT REVENUE	(29,877)	-3 41%	1	0 00%	(1,263)	-0 20%	_	0 00%	(300)	0,00%	0	0 00%	0	0 00%	0	0.00%	0	0 00%	(31,439)	-0.37%	
GRAND TOTAL	877,271	100 00%	997,726	100 0 1%	717,802	99 83%	1,450,019	100 09%	1,517,854	100 02%	1,323,370	100.18%	490,663	100 00%	979,601	100.00%	257,597	100.00%	8,611,905	100.00%	

NOTE: Data reflects Current Forecast

TOTAL METRO SAFETY SUMMARY Prepared by.
MASS TRANSIT GROUP



# METRO PASADENA BLUE LINE

**EXECUTIVE SUMMARY** 

#### **EXECUTIVE SUMMARY**

In March 1995, the MTA Board formed a peer review panel to review the project construction costs and to determine cost reduction opportunities. Findings of the peer review panel will be presented to the MTA Board in June 1995. After which, staff will adjust the project budget and forecast to reflect the panel recommendations and the revised budget will be forwarded to the MTA Board for a formal adoption. In light of these activities, the project budget in this reporting period is adjusted back to reflect the original project budget of \$841 million adopted in January 1993; however, the current forecast of \$998 million corresponding with the financial plan and schedule adopted by the MTA Board in the Long Range Plan will remain until a new budget is formally adopted by the MTA Board. This forecast and the revised ROD of June 2002 will continue to be used as the baseline for project cost and schedule comparison.

The Final Design percent complete for the month of May is 78.8%, up from 78.5% reported last month.

Due to Amendment 4 not being approved by the MTA Board, most station and line segment designers have placed themselves on hold because of delayed payment issues. Limited final design progress was realized by the design continuing under the limited scope on Memorial Park Station, with Holly Street remaining open to vehicular traffic. The design continues on Contract C6450, Del Mar to Memorial Park Line Segment, to a Pre-Final submittal that is scheduled for June 26, 1995. Discussions continue on finalizing the scope of work for a new Sierra Madre Villa Station parking lot location at the Johnson & Johnson site, and the 210 Freeway Line Segment design. Discussions are also in progress by MTA for a prospective joint development at the SMV site which may affect pedestrian access to the station platform. Camera Ready documents are at the final stages of completion for Contract C6490, Union Station, with the advertisement date of June 15, 1995. Bid documents continue to be finalized for Contract C6420, Los Angeles River to Arroyo Seco, for the advertisement date of July 5, 1995.

#### COST STATUS (in millions)

Current Adopted Budget \$841

Current Forecast \$998

#### **SCHEDULE STATUS**

Current Revised Revenue Operations Date: June 2002

Design Progress

Final Design - Actual 78.8% Overall Design - Actual 82.6%

Construction Progress

Los Angeles River Bridge - Actual 90.0%
Arroyo Seco Bridge - Actual 26.8%
Overall Construction - Actual 20%

#### **REAL ESTATE STATUS**

MONTH	NUMBER OF PARCELS	PARCELS AVAILABLE	PARCELS NOT	PARCELS NOT	
			AVAILABLE (ON SCHEDULE)	NUMBER	AVG DAYS BEHIND
THIS MONTH	163	17	142	4	80
LAST MONTH	163	17	142	4	60

#### **AREAS OF CONCERN**

#### Yard Site Location

Concern:

A temporary maintenance facility at the Midway Yard has been formally adopted as part of the baseline scope of work. In making the yard a more permanent facility per MTA Operations' requirements, the project has been experiencing cost growth due to the uncertainty of constructing the Glendale-Burbank LRT Line.

Action:

MTA Construction Division and EMC have identified the budget issues related to the maintenance facility. Value engineering was initiated to reduce cost growth.

Status:

Final design is currently on hold due to the preparation and negotiation of the design and cost recovery plan. Final Design will resume upon negotiation of the recovery plan. The Final Design submittal is scheduled for September 1995. Evaluation by Operations is continuing on providing wheel truing and heavy repair at either Long Beach Yard or Metrolink's Taylor Yard facilities. Other heavy repair alternatives are also being considered as part of an independent value engineering process. A cost benefit analysis is in progress by MTA Operations.

#### Ratkovich Interface at LAUPT

Concern:

Location of the LRT terminus at **U**nion Station and aerial guideway alignment on Vignes Street involves interface with the Ratkovich Villanueva Partnership. The alignment crosses Ratkovich's interests at two locations along the Terminal Annex property.

Action:

Negotiation of the easement is required with Ratkovich. Completion of Chinatown Aerial Structure Camera Ready design submittal is on hold pending approval of the EMC amendment by the MTA Board.

Status:

Meeting was held with Ratkovich and LADOT on November 30, 1994 regarding the street improvements on Vignes Street. A tentative agreement was reached with all parties. Final concept drawings were issued by the MTA. MTA is waiting for written concurrence by LADOT and Ratkovich prior to commencing final design.

#### AREAS OF CONCERN (cont.)

#### Real Estate

Concern: The real estate acquisition effort is behind schedule. In-Progress and

Final designs include additional parcels to be certified and acquired.

Action: The Pasadena Project team has facilitated bi-weekly parcel acquisition

schedule meetings with LACMTA and EMC real estate personnel.

Status: Appraisals are continuing. A priority list for real estate acquisitions has

been prepared for the project to reflect the approved fiscal year budget.

The delay in real estate acquisitions is being evaluated on line segment

Contract C6420, which is scheduled to be advertised for bid in June

1995.

#### EMC Design Cost Amendment

Concern: The engineering costs for final design are expected to exceed the

approved Contract Work Order 21 budget by approximately \$14 million.

Action: MTA project staff members are negotiating the reported scope changes.

Status: Fluor Daniel has completed a cost-to-complete evaluation. Staff

continues to negotiate outstanding CCRs. MTA Board report has been

prepared for board action in June to include only those costs that have

been reviewed by Fluor Daniel.

#### AREAS OF CONCERN (cont.)

#### Del Mar Station

Concerns: The transportation center proposed by the City of Pasadena has major

potential impacts on the Del Mar park-and-ride facility, final station

design and line segment design for Del Mar to Memorial Park.

Action: MTA Construction Division is continuing discussions with the City of

Pasadena on interface with the station and line segment designs and transportation center. The City of Pasadena has a consultant on board

to design the transportation center.

Status: Final designs are based on the assumptions shown on the In-Progress

drawings for C6500, Del Mar Station, for the transportation center. The results from the City's sponsored charette have been submitted to MTA for feasibility review and development of cost impacts. All costs impacts identified above the baseline design are being assigned as City's

responsibility.

#### Sierra Madre Villa Station

Concern: Selection of a station site alternative to the original Space Bank site is

required due to the potential existence of serious hazardous material at

that site.

Action: The MTA Board has approved the selection of the SMV station site.

MTA needs to conclude the offer to purchase the Johnson & Johnson

station site.

Status: MTA submitted a revised offer to Johnson & Johnson, which was

rejected by the owner. Condemnation proceedings are continuing. MTA

is discussing joint development options with the Best Buy Company.

#### AREAS OF CONCERN (cont.)

#### Marmion Way Corridor

Concern: Results of the evaluation of the design of Marmion Way between Avenue

50 and Avenue 60 as a betterment have led to increased project design

and construction costs.

Action: Agreement is required from City of Los Angeles for betterment issues.

Status: MTA Construction Division is considering to reopen and renegotiate the

master cooperative agreements with the City of Los Angeles. Arbitration

remains an option.

#### Chinatown Station

Concern: Selection of Chinatown pedestrian linkage alternative will impact the

Chinatown Aerial Structure and stations designs, and may require

additional property acquisition.

Action: MTA Construction Division is working closely with Central Area Team on

defining suitable pedestrian access from Broadway Street to the

Chinatown Station platform.

Status: Follow-up community meeting was held April 19 with a consensus

reached by Chinatown representatives on April 20 to support the elevated pedestrian alternative along the north side of College Street.

Further progress on design is pending the approval of the EMC

amendment by MTA Board.

#### AREAS OF CONCERN (cont.)

#### 210 Freeway Stations

Concern: Noise impacts at Lake, Allen and Sierra Madre Villa Stations from

adjacent freeway traffic.

Action: Review of noise criteria and conformance to EIR.

Status: EMC has completed noise readings at the freeway station sites and has

reported that no specific mitigation was used by other transit properties with freeway stations. Lake Avenue Station was recommended for deletion by the Pasadena Peer Group. Further action is pending further

recommendations from the independent value engineering group.

#### **KEY ACTIVITIES - ACCOMPLISHED IN MAY**

- MTA Construction Division and EMC continued negotiations on outstanding contract change requests for design changes. An EMC amendment has been resubmitted for the June MTA Board meeting for those CCRs that can be justified as part of the Pasadena design audit report prepared by Fluor Daniel.
- MTA continued to evaluate 1999 ROD based on MTA Board motion.
- Contract C6410, L.A. River Bridge: Work continues on schedule. Completed installation of ductbanks and curbs on bridge deck of conventional spans. Ductbank installation is in progress on south bridge approach. Construction work of the segmental bridge spans is 90% complete. Conventional bridge spans are complete. Removal of bridge falsework is in progress.
- Contract C6420, LARB to Arroyo Seco Line Segment: Continued coordination of action items preceding advertisement. Continued with estimating quantities and constructability review of contract documents.
- Contract C6430, Arroyo Seco Bridge Reconstruction: Contractor has completed retaining wall pile foundations; construction of walls are in progress for bridge abutments and bridge towers. Work continued on drilled pile foundations. Work continues on stripping, painting and strengthening the bridge towers in the park laydown area.
- Contract C6435, Reconstruction and Retrofit of Steel and Concrete Bridges: Award of contract approved at the May 24 MTA Board meeting. Resolution of bid protest is in progress.
- Final design continues on C6450, Del Mar to Memorial Park, below-grade line segments to a Pre-Final submittal on June 26, 1995.
- Contract C6490, Union Station Platform: Continued to finalize Camera Ready submittal.

#### **KEY ACTIVITIES - PLANNED FOR JUNE**

- Continue Public Affairs meetings with Community Advisory Committees representing the cities of Los Angeles, South Pasadena and Pasadena.
- Continue to negotiate remaining EMC CWO #21 contract change requests received from EMC and section designers.
- Contract C6410, LA River Bridge: Complete construction of ductbanks and curbs. Complete all remaining segmental sections including closure pour over river channel.
- Contract C6430, Arroyo Seco Bridge Reconstruction: Continue retaining wall pile foundation construction on east side of 110 freeway. Complete stripping and painting of towers and bents.
- Contract C6435, Reconstruction and Retrofit of Steel and Concrete Bridges: Complete Pre-Construction Survey. Issue notice to proceed.
- Continue final design on C6450, Del Mar to Memorial Park line segment, and station design contracts.
- Complete Camera Ready submittal for Contract C6490, Union Station, and bid documents for Contract C6420, Los Angeles River to Arroyo Seco line segment.
- Complete Camera Ready designs on Contract P2070, Special Trackwork Procurement.
- Contract P2100, Precast Concrete Ties: Process change requests from contractor and Authority.

# MTA CONSTRUCTION DIVISION PASADENA BLUE LINE Project Cost by Element

Report Date: 07-Jun-95 Status Date: 26-May-95

Page:

(\$ x 000's)

<b>\</b>		Bud	get	Commit	monts	Incurre	d Cost	Ехрег	nditures	- Current	
	D escription	Orlginal (1)	Current (2)	Period (3)	To Date (4)	Period_ (5)	To Date (6)	Period (7)	To Date (8)	Forecast (9)	Variance (9-2)
Т	Construction	515,171	593,025	27	59,201	1,393	19,688	988	17,001	593,899	875
s	Professional Services	183,206	237,107	111	89,766	2,115	77,655	2,115	77,655	236,668	(439)
R	Real Estate	68,100	77,721	2,102	18,168	2,153	17,732	2,153	17,732	77,721	0
F	Utility/Agency Force Accounts	8,442	12,925	. 0	4,960	291	2,470	291	2,470	12,925	0
D	Special Programs	3,377	2,367	0	390	2	285	2	285	2,367	0
С	Contingency	62,705	74,581	0	0	0	0	0	0	74,145	(436)
A	Project Revenue	0	0	(2)	(18)	(2)	(18)	(2)	(18)	0	0
	Project Grand Total:	841 000	997 726	2 239	172 466	5 952	117 812	5 546	115 125	997 726	(0)

NOTE: REFER TO APPENDIX FOR REPORT DEFINITIONS - EXPENDITURES LAG ONE MONTH

Project: R05

Page -

# 07-Jun-95

# METROPOLITAN TRANSPORTATION AUTHORITY METRO RAIL PASADENA LINE PROJECT (IN THOUSANDS OF DOLLARS)

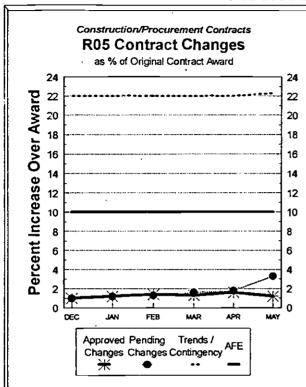
**MAY 95** 

#### STATUS OF FUNDS BY SOURCE

	TOTAL FUNDS	TOTAL FUNDS	СОММПМ	ENTS	EXPENDIT	URES	BILLED TO SOURCE		
SOURCE	ANTICIPATED	AVAILABLE	\$ % 		<b>\$</b>	%	\$	·% 	
STATE PROP 108	\$20,000	\$20,000	\$20,000	100%	\$20,000	100%	\$20,000	100%	
STATE RAIL BOND	\$317,800	\$0	\$0	0%	\$0	0%	\$0	0%	
PROP C (HIGHWAY 25%)	\$189,568	\$115,800	\$112,466	59%	\$55,125	29%	\$55,125	29%	
PROP C (40% DISC.)	\$470,358	\$40,000	. \$40,000	9%	\$40,000	9%	\$40,000	9%	
TOTAL	\$997,726	\$175,800	\$172,466	17%	\$115,125	12%	\$115,125	12%	

NOTES: EXPENDITURES ARE THROUGH APRIL 1995.

#### **FINANCIAL STATUS**



#### **Contract Change Analysis**

Executed and pending changes remain well below the Authorization for Expenditure (AFE). However, the total forecast is approximately 12% above the AFE due to the following:

B611 - Running Rail: The forecast includes increased costs due to price escalation due to the extension of the Pasadena Line Schedule resulting from continued funding shortages.

P2100 - Concrete Ties: The forecast includes an additional \$1.8 million to reimburse the LA-LB budget for material previously bought for the Pasadena Line. The AFE was based solely on the <u>additional</u> quantities required for Pasadena Line.

NOTE: The percentage value lines shown for AFE and FORECAST are based on current values only. Changes over time will appear in future reports.

Construction/Procurement Contracts

# Awarded Contract Cost, Forecast and Budget

Dollars in Thousands	Current	Previous	Variance
ORIGINAL CONTRACT AWARD	\$30,032	\$30,032	\$0
APPROVED CHANGE VALUE*	\$356	\$476	-\$120
CURRENT VALUE	\$30,388	\$30,508	-\$120
PENDING LOGGED CHANGES	\$630	\$56	\$574
TRENDS AND CONTINGENCY	\$5,751	\$6,155	\$3.0.
TOTAL FORECAST	\$36,719	\$36,719	\$0 
CONSTR. BUDGET	\$36,858	\$36,858	\$0

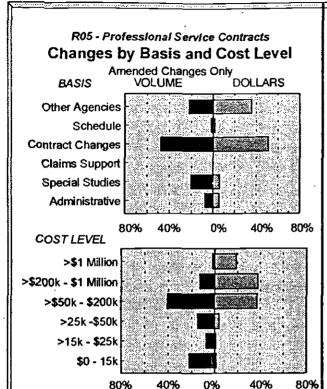
 Includes by Executed Change Orders and Approved Not-to-Exceed Costs. Forecast and Budget for Awarded contracts only.

### **Contract Forecast Analysis**

The total forecast remains within the budget for the awarded Pasadena Line contracts.

The increase in pending changes are primarily due to bid item quantity changes.

#### **FINANCIAL STATUS**



#### **CHANGE BASIS ANALYSIS**

Pasadena Consultant Change Request's (CCR) are primarily due to changes during the design phase of non-awarded construction contracts accounting for approximately 48% of the total contract change volume and 51% of the total contract change value.

Outside agency changes account for 22% of the total change volume and 35% of the total contract change value.

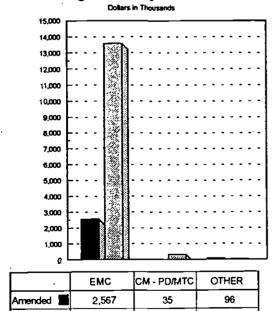
Cost recovery on changes due to outside agencies is currently under review. A cost recovery estimate will be reported on when available.

#### **CHANGE COST LEVEL ANALYSIS**

57% of the total change cost falls within the MTA Board authority level which equates to 15% of the overall change volume.

85% of the change volume falls within the Project Managers approval authority which equates to 43% of the overall change value.

# R05 - Professional Services Contracts Change Cost by Consultant



325

360

# PROFESSIONAL SERVICES CHANGE ANALYSIS

4 Advanced Work Authorization's (AWA) were assigned this period with a not-to-exceed obligation of \$330k. There were no contract amendments approved this period.

MTA Contracts plans to present amendment 4 to EMC Contract Work Order #0021 at the June 28, 1995 MTA Board meeting which will add and resolve 37% of the in process changes.

DATA SOURCE:

CCS: CCR REPORTS

CHNGSAMP

In Process 💹

Tota

13,576

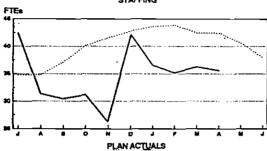
16,143

46

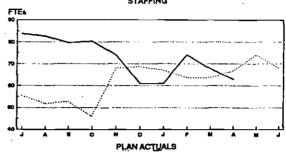
142

# PASADENA BLUE LINE STAFFING PLAN VS. ACTUALS

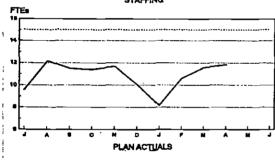
## CONSTRUCTION MANAGEMENT CONSULTANT



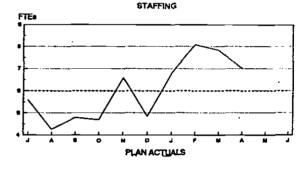
## ENGINEERING MANAGEMENT CONSULTANT



## METRO CONSTRUCTION



#### OTHER METRO CONSTRUCTION



# STAFFING ANALYSIS

## **Construction Management Consultant**

The actuals are lower than planned due to funding constraints and resulting changes to the project schedule.

## **Engineering Management Consultant**

The actuals are lower than planned due to the system and station design contracts being placed on hold.

## **Metropolitan Transportation Authority**

The actuals are lower than planned due to delays in project implementation because of funding constraints and value engineering studies.

COSTS SHOWN ARE FOR PROJECT ROS ONLY. (ALLOCATED)

# R05 - Pasadena-Blue Line PROJECT CHANGE VALUES ONLY

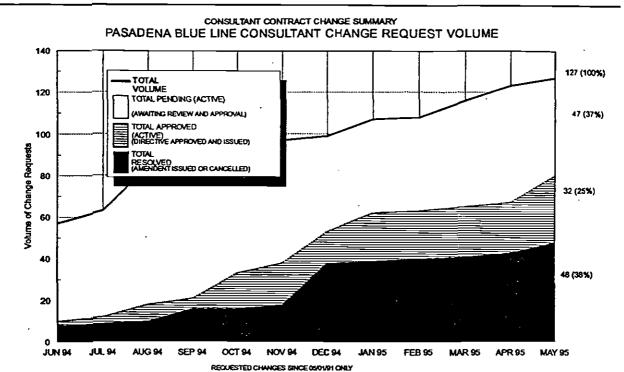
## PROJECT CHANGE ACTIVITY SUMMARY: CHANGES V. BOARD APPROVED CHANGE CONTINGENCY

MTA APPRI			CONTINGENCY		1	сн	APPROVED ANGES TO DATE			Ì	REMAINING AFE		PROJ	ECTED		
CONTRACT	AWARO VALUE	ALLOWE0	CURRENT ALLOWED	TOTAL APPROVEO AFE (ROS)		APPROVED CHANGES	CURRENT CONTRACT VALUE	% INCR	% CTG USEO	% COMP- LETE	CURRENT UNUSED ALLOWANCE		PENDING CHANGES	REMAINING FORECAST AFE	% AFE USED	% INCR
Α.	8.	1 C.	D.	E.(8+D)	1	F.[1]	G.(B+F)	H.[2]	[ 1.	J.	[ K.(D-F)	1	L.[3]	M.(K-L)	N,	0,
B611	14,445,450	10%	1444,545	14,889,995	1	#0	\$4,445,450	0.0%	0%	0%	\$444,545	1	(#317,975)	\$752,520	72%	-7.29
C6410	112,758,037	10%	11,275,804	\$14,033,841	1	4355,819	¥13,113,856	2.8%	28%	68%	4919,985	1	<b>\$362,864</b>	\$557,121	56%	5.69
C6430	110,359,484	10%	\$1,035,946	\$11,395,410	T	10	10,359,464	0.0%	0%	8%	1 01,035,946	ī	<b>\$624,762</b>	\$411,184	60%	6.09
C6435	<b>*</b> 0	***%	40	•0	Τ	+0	<b>\$</b> 0	***.*%	****	0%	1 10	1	10	\$0	****	0.09
C6525		***%	40		t	\$0	10	***.*%	***%	%	1 40	ţ	<b>#</b> 0		****	• • • • • • • • • • • • • • • • • • • •
C7300	<b>\$</b> 0	1*	10	#0	1	#0	10	***.*%	****	0%	1 40	Ī	\$0	\$0	••••	•••
EN028	10	1 ****	60	\$0	Т	40	10	***.*%	****	0%	1 40	Ī	<b>\$0</b>	\$0	9	• • • • •
EN031	#0	****	#0	\$0	1	10	10	***.*%	***%	0%	1 40	1	#0	**	****	• •••,••
P0060		1*	10		1	40	10	***.*%	***%	%	1 10	_1	10	• • • • • • • • • • • • • • • • • • • •	****	• • • • • • • • • • • • • • • • • • • •
P2 100	\$2,489,300	10%	\$248,930	12,716,230	1	#0	\$2,469,300	0.0%	0%	0%	0246,930	ı	(\$10,000)	\$256,930	-49	• • • • • • • • • • • • • • • • • • • •
PM421	10	1#	#0	#0	1	•0	10	***.*% [	***%	0%	40	-1	<b>#</b> 0		****	0.01
PM601	#0	***%	10	#0	ı	10	10	f**\*%	****	0%	1 40	_{	10	\$0	****	•
	\$30,032,251°	10%	<b>\$3,003,225</b>	#33,035,478	1	\$355,B19	♦30,388,070	1.2% [	12%	2%	1 \$2,647,408	ī	#859,851	11,987,755	34%	3.49

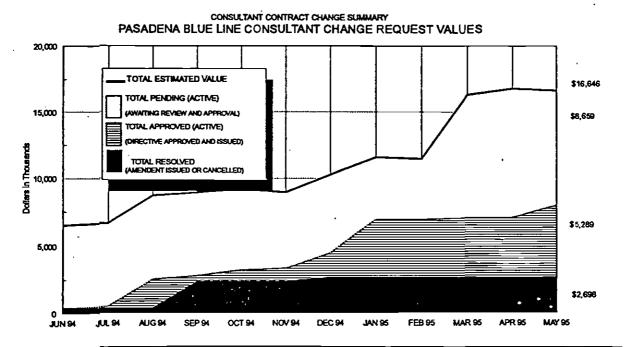
<sup>11 ·</sup> AFE increase required

<sup>1 -</sup> AFE increase MAY be required to cover pending changes.

<sup>[+]</sup> Costs shared with other projects. Costs shown ere for ROS ONLY. [1] includes both executed CO's and authorized (WACN) changes [2] % increase over original swerd [3] Logged contract changes ONLY

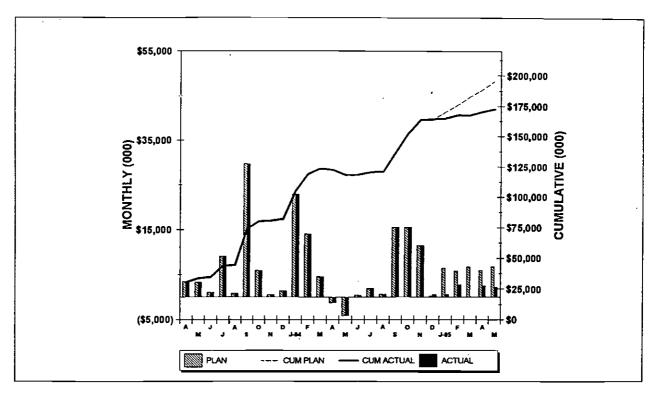


AGE OF UNRESOLVED CONSULTANT CHANGES											
TIME	0-30 DAYS	30-60 DAYS	61-90 DAYS	OVER 90	TOTAL ACTIVE						
VOLUME	4	4	6	65	79						
PERCENT	5%	5%	8%	82%	100%						

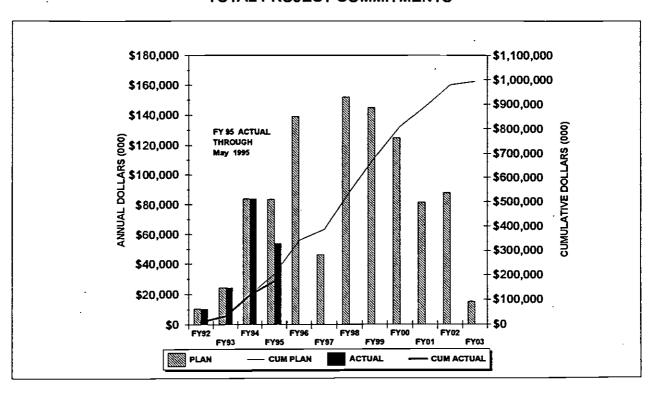


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#### **ANNUAL PROJECT COMMITMENTS**

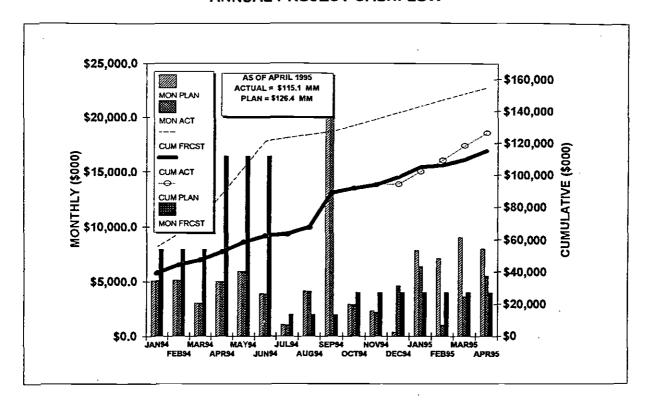


**TOTAL PROJECT COMMITMENTS** 

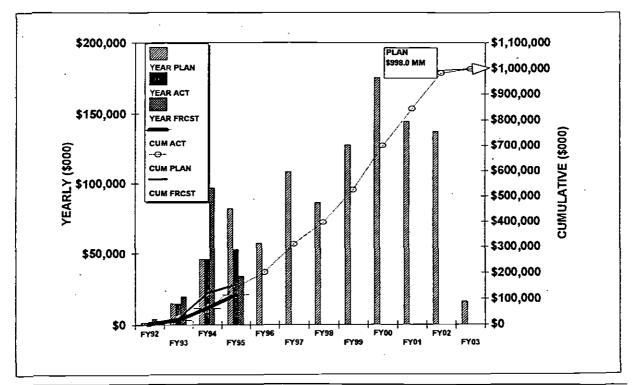


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#### ANNUAL PROJECT CASHFLOW

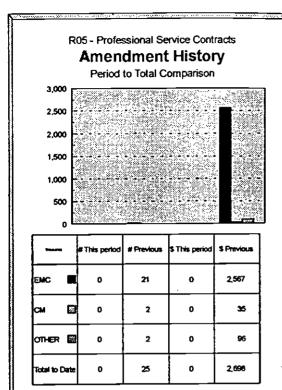


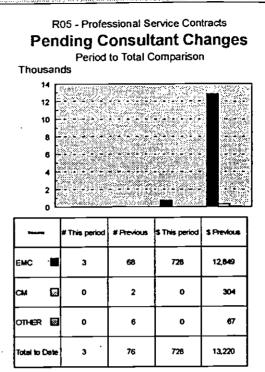
#### **TOTAL PROJECT CASH FLOW**



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#### **COST STATUS**





#### CONSULTANT CHANGE REQUEST ANALYSIS

No contract amendments approved this period

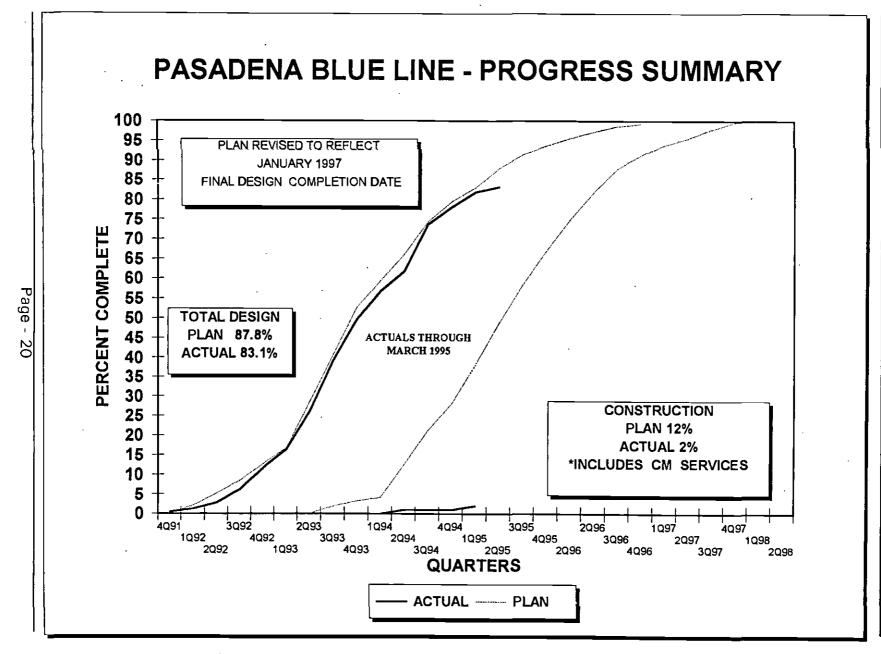
The Pasadena CCR backlog was reduced by 10% this period.

Cost recovery on changes due to outside agencies is currently under review. A cost recovery estimate will be reported on when available.

3 new CCR's were submitted this period 1 of which will require MTA Board approval as follows:

R05-E0070-276.01 - Out-Of-Scope Right-of-Way Work - presented at the 03/09/95 Construction Committee Meeting.

5 CCR's were rejected/cancelled by the MTA this period.

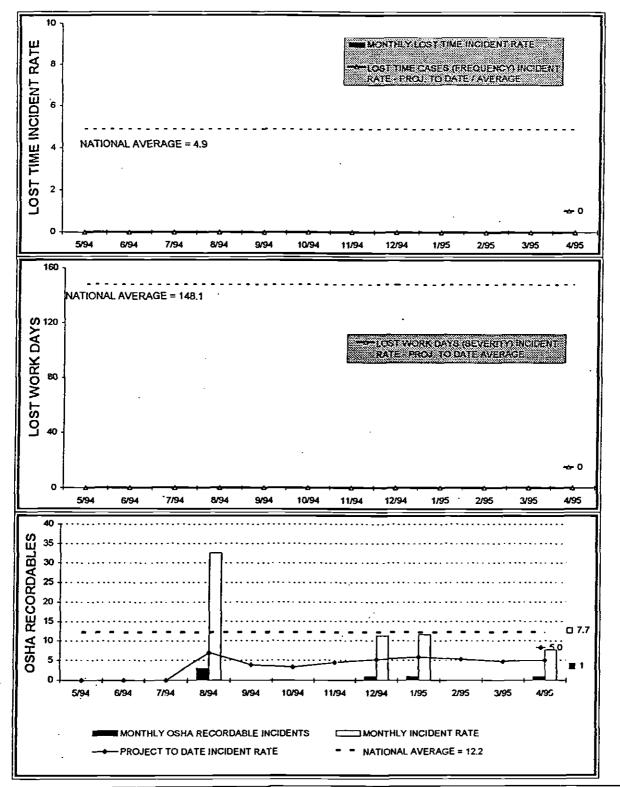


#### **CRITICAL PATH DIAGRAM**

The Project critical path goes through C6460, Memorial Park to Sierra Madre Villa Line Segment; C6550, Trackwork Installation; H0090, Traction Electrification System Overhead Contact System; H0060, Train Control; Integrated Systems; Pre-revenue Operations and ROD.

#### METRO PASADENA BLUE LINE SAFETY SUMMARY

Prepared by: MASS TRANSIT GROUP

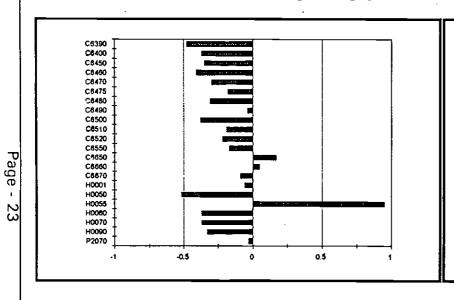


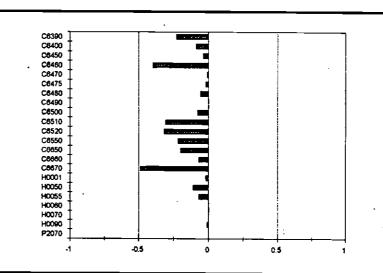
### Pasadena Blue Line

Final Design Work Only

#### **Cost Performance Index**

#### **Schedule Performance Index**





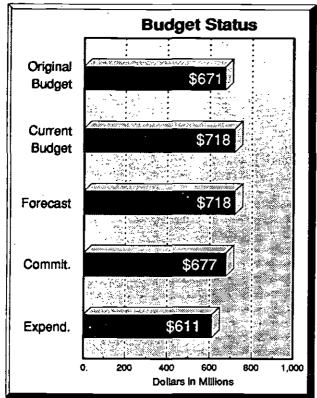
CPI Legend
Under 100% = Over Budget
Over 100% = Under Budget

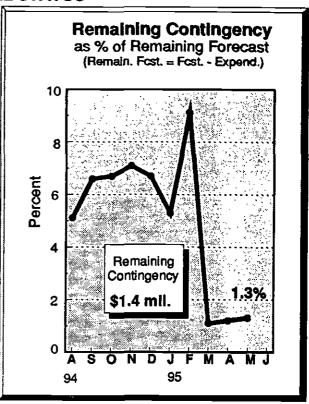
SPI Legend
Under 100% = Behind Schedule
Over 100% = Ahead of Schedule

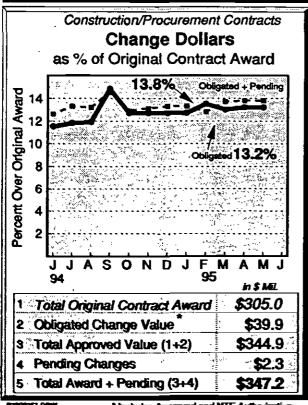
Systems design work is on hold with anticipation to resume in late 1995.

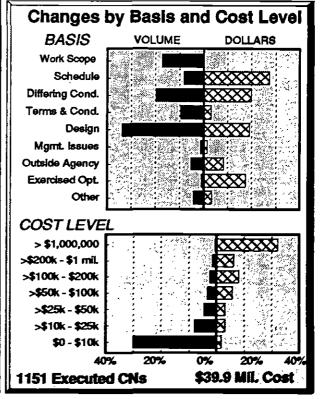
# METRO GREEN LINE

# **EXECUTIVE SUMMARY**









\* Includes Approved and NTE Authorizations

#### SCHEDULE AND SAFETY STATUS

#### **MTA Critical Activities July 1995**

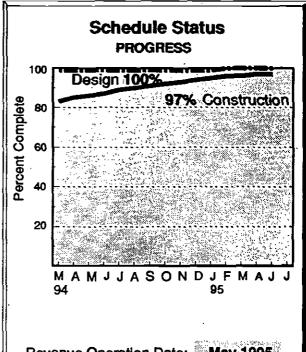
✓ AWARD APPROVAL No contract awards this month.

#### **Employment Status**

Months of Employment Provided

17,719

Based on an average 29 Job-months provided per million expended



Revenue Operation Date: May 1995

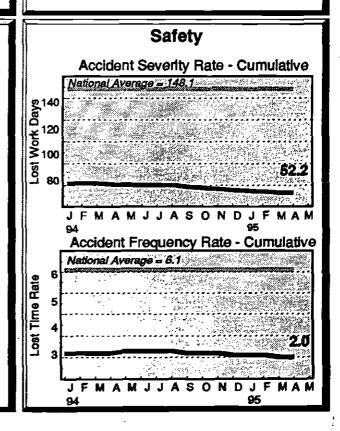
(Approved)

#### **Schedule Status CRITICAL PATH - 1 Year Outlook**

The following contracts are on the Critical Path through June 95:

CT044-12 Construction Elevators/Escalators

Systems Integrated Test Norwalk-Marine ABS



#### **EXECUTIVE SUMMARY**

COST STATUS (in millions)

• Current Budget \$717.8

• Current Forecast \$717.8

#### **SCHEDULE STATUS**

Current Approved Revenue Operations Date
 May 1995

Design Progress - Actual 100%

• Construction Progress - Actual 97%

#### **REAL ESTATE STATUS**

			PARCELS NOT		OT AVAILABLE SCHEDULE)
MONTH	NUMBER OF PARCELS	PARCELS AVAILABLE	AVAILABLE (ON SCHEDULE)	NUMBER	AVG DAYS BEHIND
THIS MONTH	39	39	0	0	0
LAST MONTH	39	39	0	0	0

#### AREAS OF CONCERN

#### **OPENED**

Concern: Construction items not completed by Caltrans Phase I/II contractors could

delay state certification of elevators/escalators on Century Freeway Stations.

Action: Identify items that need to be corrected and/or completed and coordinate

with MTA, Caltrans and OK to identify the most expedient method to

complete necessary items.

Status: Meeting is scheduled between EMC, Caltrans, Montgomery, OK and MTA

to identify outstanding items.

#### **KEY ACTIVITIES -MAY 1995**

- Commencement of Pre-Revenue Operations on May 27
- H1100 (Automatic Train Control) completed acceptance testing of Start-Up vehicle carsets.
- H1100 (Automatic Train Control) completed Control Line Testing Norwalk -Marine
- Start-Up completed Public Address Integrated Test
- Start-Up completed Station Intrusion Integrated Test
- Start-Up completed SCADA/Fire Detection Suppression Integrated Test.
- Start-Up completed PA/VMS Integration Test
- H1100 (Automatic Train Control) commenced Static Testing at Hawthorne Yard

#### **KEY ACTIVITIES - PLANNED FOR JUNE 1995**

- C0095 (Fencing Wayside Intrusion Detection System) complete all contract work
- H0889 (Light Rail Radios) install upgraded repeaters at Mt. Lukens
- H1100 (Automatic Train Control) complete Static testing at Hawthorne Yard
- Caltrans (CT44-12 Elevators/Escalators) begin Pre-Testing of Elevators for State Certification

Page No. 1

#### MTA CONSTRUCTION DIVISION PROJECT COST REPORT COST BY ELEMENT

Project: R23 METRO GREEN LINE

Page 4

Period: Apr 28, 1995 to May 26, 1995

Run Date: May 31, 1995

Units: \$ in Thousands (Truncated)

	ORIGINAL BUDGET	CURRENT BUDGET	COMMITMENTS	INCURRED	EXPENDITURES	CURRENT FORECAST	FORECAST VARIANCE
ELEMENT / DESCRIPTION		Period To Date	1				
T CONSTRUCTION	470,191	0 485,898	547 446,129	4,262 408,821	4,662 394,576	·101 478,705	-7,193
S PROFESSIONAL SERVICES	108,562	0 180,477	: 102 191,367	3,241 179,675	3,241 179,728	22 195,946	
R REAL ESTATE	36,927	0 28,522	-53 24,995	-50 24,995	-50 24,995	0 26,047	
F UTILTY/AGENCY FORCE ACCOUNTS	7,656	0 10,500	-57 11,574	-158 9,762	-158 9,762	0 12,043	
O SPECIAL PROGRAMS	4,675	0 4,790	-1,242 3,713	-42 2,634	-42 2,634	-966 3,824	
C PROJECT RESERVE	59,613	0 14,131	o o	0 0	0 0	1,045 2,498	-11,633
A PROJECT REVENUE	-16,626	0 -6,518	0 -1,263	0 -604	0 -604	0 -1,263	5,254
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' '							1
	1	ı		}			•
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							l
		i					
GRAND TOTAL	671,000	0 717,802	-704 676,517	7,252 625,284	7,652 611,092	0 717,802	0

07-Jun-95

#### FINANCIAL DETAIL

# METRO RAIL GREEN LINE PROJECT (IN THOUSANDS OF DOLLARS)

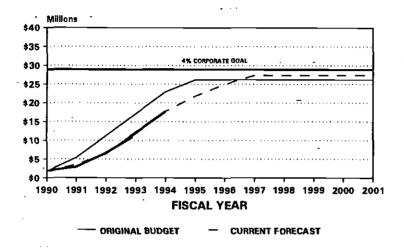
**MAY 95** 

# STATUS OF FUNDS BY SOURCE

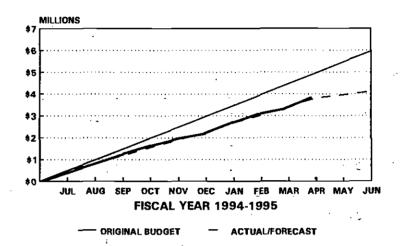
TOTAL	TOTAL	COMMITMENTS	EXPENDITURES	BILLED TO SO	URCE
ANTICIPATED	AVAILABLE	\$ %	<b>\$</b> * %	\$	%
\$205,136	\$205,136	\$205,136 100%	\$205,136 100%	\$205,136	100%
\$153,872	\$153,872	\$153,872 100%	\$153,872 100%	\$153,872	100%
\$246,400	\$183,318	\$205,190 83%	\$183,318 74%	\$183,318	74%
\$22,400	\$22,400	\$22,400 100%	\$22,400 100%	\$22,400	100%
\$84,000	\$84,000	\$84,000 100%	\$41,281 49%	\$37,454	45%
\$5,994	\$5,085	\$5,919 99%	\$5,085 85%	\$5,085 <sup>†</sup>	85%
\$717,802	\$653,811	\$676,517 94%	\$611,092 85%	\$607,265	85%
	\$205,136 \$153,872 \$246,400 \$22,400 \$84,000 \$5,994	\$205,136 \$205,136 \$153,872 \$153,872 \$246,400 \$183,318 \$22,400 \$22,400 \$84,000 \$84,000 \$5,994 \$5,085	FUNDS AVAILABLE \$ %  \$205,136 \$205,136 \$205,136 100% \$153,872 \$153,872 \$153,872 100% \$246,400 \$183,318 \$205,190 83% \$22,400 \$22,400 \$22,400 100% \$84,000 \$84,000 \$84,000 100% \$5,994 \$5,085 \$5,919 99%	FUNDS AVAILABLE \$ % \$ %  \$205,136 \$205,136 \$205,136 100% \$205,136 100% \$153,872 \$153,872 \$153,872 100% \$153,872 100% \$246,400 \$183,318 \$205,190 83% \$183,318 74% \$22,400 \$22,400 \$22,400 100% \$22,400 100% \$84,000 \$84,000 \$84,000 100% \$41,281 49% \$5,994 \$5,085 \$5,919 99% \$5,085 85%	FUNDS AVAILABLE \$ % \$ % \$  \$205,136 \$205,136 \$205,136 100% \$205,136 100% \$205,136 \$153,872 \$153,872 \$153,872 100% \$153,872 100% \$153,872 \$246,400 \$183,318 \$205,190 83% \$183,318 74% \$183,318 \$22,400 \$22,400 \$22,400 100% \$22,400 100% \$22,400 \$84,000 \$84,000 \$84,000 100% \$41,281 49% \$37,454 \$5,994 \$5,085 \$5,919 99% \$5,085 85% \$5,085

NOTE: EXPENDITURES ARE CUMULATIVE THROUGH APRIL 1995.

#### AGENCY COST GREEN LINE



# FISCAL 1995 AGENCY COSTS GREEN LINE



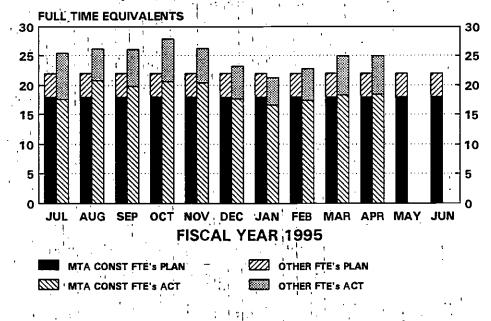
# PROJECT AGENCY COSTS GREEN LINE (\$000)

TOTAL PROJECT BUDGET	<b>\$717,802</b>
ORIGINAL BUDGET	\$26,189
BUDGET % OF TOTAL PROJECT	3.6%
CURRENT FORECAST	\$27,407
FORECAST % OF TOTAL PROJECT	3.8%
ACTUALS THROUGH FY 94	\$17,711

# FISCAL YEAR 1995 AGENCY COSTS GREEN LINE (\$000)

ORIGINAL BUDGET	\$5,965
CURRENT FORECAST	\$4,117
BUDGET PLAN TO DATE	\$4,970
ACTUAL TO DATE	\$3,819

# STAFFING PLAN VS. ACTUAL



FY'95 BUDGET

# GREEN LINE STAFFING PLAN FISCAL YEAR 1995

MIA CONSTRUCTION FIE'S PLAN 🛴		18
MTA CONSTRUCTION FTE'S ACTUAL		: 18
OTHER FTE's PLAN	131	4
OTHER FTE's ACTUAL		. 7
TOTAL FTE's PLAN		22
TOTAL FTE's ACTUAL	• •	25

#### Metro Green Line CONTRACT CHANGE ACTIVITY SUMMARY: CHANGES V. BOARD APPROVED CHANGE CONTINGENCY

	PPROVED CT AWARD		CHAI	MTA A		VED NCY (CTG)	0	APPROVED	E			REMAINING CONTINGENCY	PRO	IECTED
CONTRACT	AWARD VALUE	ALLOV ANCE	/- [ /	CURRENT APPROVEO ONTINGENCY	,	TOTAL APPROVED AFE	APPROVED CHANGES*	CURRENT CONTRACT VALUE	CTG USED	COM LETE	<u> </u>	CURRENT UNUSED CONTINGENCY	OTHER LOGGED PENDING CHANGES	FORECAST KEMAINING CTO CONTINGENCY USED
<b>A</b> .	В.	I C.	(	). = {8xC}	ı	E. [8+D]	FF.	G =  B+F	∥ н.	L	ı	J. (D-F)	ķ., 1	L. IJ-KI   M.
C0090	<b>43,739,91</b> 0	13%		<b>\$472</b> ,	991	44,212,901	\$239,623	<b>43,979,</b> 533	51%	0	* I	\$233,368 <b> </b>	\$47,600 <b> </b>	#185,768   81%
C0095	49,573,083	16%	ī	<b>♦1,488</b> .	617	¢11,061,700	41,326,845	\$10,899,928	89%	1 77	<b>%</b> J	\$161,772 <b>}</b>	#100,000 B	#61,772   96%
C0100	459,828,710	15%	丁	\$8,971,	290 ]	<b>468,800,000</b>	<b>47,417,817</b>	467,246,627	83%	J 88	% <u> </u>	\$1,663,473 <u>]</u>	#81,669 <b>[</b>	#1,471,904   84%
C0101	\$11,279,960	63%	i	<b>\$7,120,</b>	040	\$1B,400,000	<b>46,104,927</b>	117,384,687	86%	°J 100	<u>× j</u>	41,016,113 ]	<i>f</i> 0]	#1,015,113   86%
C0110	\$7,321,537	26%	T	<b>\$1,878</b> ,	463	49,200,000	4 \$1,226,282	48,547,819	65%	100	% į	<b>46</b> 62,181 <b>▮</b>	101	#652,181   65%
C0170	\$1,130,971	10%	i	<b>\$113</b> ,	097	\$1,244,068	\$10,45B	\$1,141,429 <u> </u>	9%	99	× ]	<b>↓102,639</b>	\$140,150	(#37,511)   133%
C0400	\$19,320,000	14%	i	\$2,735,	538	¢22,055,53B	\$688, <b>077</b>	420,008,077	25%	99	× 1	<b>\$2,047,461</b>	10	12,047,461   25%
C0601	\$5,006,841	18%	ī	<b>\$888</b> ,	144 [	45,894,985	\$868,465	46,876,306	98%	99	% [	419,679 J	\$18,089	\$1,590   100%
C0600	\$15,514,000	39%	T	\$6,028,	000	\$21,542,000	\$4,030,154	419,544,164	67%	99	% <b>[</b>	\$1,997,846 <b> </b>	. 101	#1,997,846   67%
C0610	\$10,24B,912	25%	i	\$2,665,	191	\$12,814,103	42,227,906	412,476,818	87%	99	× ]	\$337,28 <b>6</b>	\$1,900	#335,385   87%
H0831	\$1,480,450	169%	ī	<b>\$2,497,</b>	474 [	\$3,977,924	42,347,373	\$3,827,823	94%	( 87	≽ į	<b>€150,101</b>	#148,891	#1,210   100%
H0832	<b>\$3,884,088</b>	220%	ī	\$B,558,	412	\$12,442,500	\$8,038,159	1 411,922,247	94 %	71	× [	\$620,2 <b>6</b> 3	\$56,000	1464,253   95%
H0889	\$3,938,759	11%	1	<b>\$438</b> ,	876 <b> </b>	\$4,377,635	4286,995	44,224,754	65 %	46	% [	<b>♦152,881</b> ▮	\$71,500 <b> </b>	#81,381   81%
H0900	\$9,948,180	10%	T	<b>\$994</b> ,	820	410,943,000	4932,508	10,880,688	94%	16	× 1	<b>462,312</b>	* #65,008	17,304   99%
H0901	13,298,329	10%	1	<b>\$329</b> ,	833 <b>[</b>	\$3,628,162	• 41 27,561	13,425,890	39%	- 39	% <u>1</u>	1202,272	(33, 200	#169,072   49%
H1 100	\$57,785,000	8%	1	\$4,622,	800 J	462,407,B00	+1,774,073	§ 459,669,073 [	38%	41	% J	<b>42.848,727</b>	\$75,859 <b> </b>	#2,772,868   40%
H1200	\$18,796,123	15%	ī	<b>\$2,819</b> ,	41 <b>8</b> ]	\$21,615,541	\$1,756,528	\$20,652,661	62%	94	× 1	` 41,062,890	(#8,500)	11,071,390   62%
H1310	\$1,298,500	42%	i -	<b>\$550</b> ,	504	<b>\$1,849,004</b>	<b>\$128,649</b>	\$1,427,148	23%	8	× ]	4421,865	. (839, 395	1#217,541)   140%
H1400	111,438,000	10%	Ť	\$1,143,	B00	112,581,800	1961,457	1 412,399,457	84%	.) 78	* 1	€182,343 <b>]</b>	- #62,808 ]	1119,535   90%
P1800	45,578,208	j 5%	1.	\$ 278,	910 [	\$5,857,118	[4766,149]	44,812,059	-275%	J 100	× 1	\$1,045,069 <b>}</b>	101	#1,045,059   -275%
P2020	\$44,625,000	12%	Ι.	<b>\$5,375</b> ,	0001	<b>\$</b> 50,000,000	\$964,094	445,589,094	18%	74	% <u> </u>	44,410,906 }	<i>\$0</i>	- 44,410,906   18%
TOTAL:	<b>\$306,034,662</b>	20%	112	\$69, <b>871</b> ,	218 [	1364,905,779	\$40,690,B03	1 4345,725,365	68%	97	% [	419,180,414 <b>]</b>	11,523,469]	\$17,656,945\ 71%

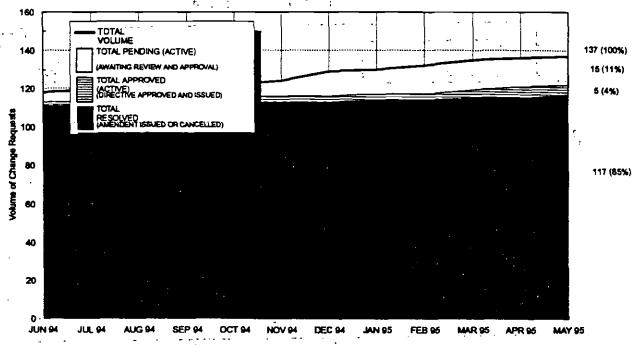
<sup>! =</sup> AFE increase may be required to cover pending changes !! = AFE increase required to cover obligated changes

NOTE: DATA CUT-OFF DATE MAY VARY FROM OTHER REPORTS SHOWING APPROVED CHANGE VALUES

σ

CONTRACT COSTS SHOWN MAY INCLUDE COSTS ALLOCATED TO OTHER METRO PROJECTS,
 Potential change costs DO NOT Include claims which have not been allowed marit as changes or other trend items.

# GREEN LINE CONSULTANT CHANGE REQUEST VOLUME

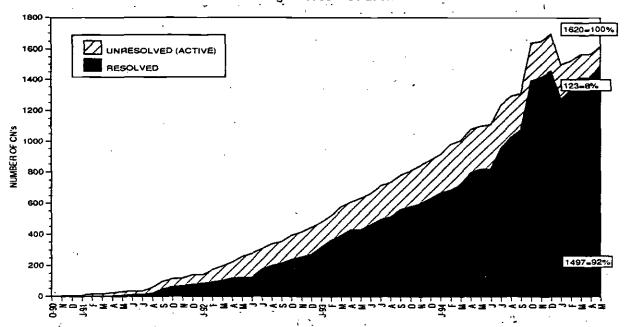


REQUESTED CHANGES SINCE 05/01/91 ONLY

AGE OF UNRESOLVED CONSULTANT CHANGES									
TIME	0-30 DAYS	30-60 DAYS	61-90 DAYS	OVER 90	TOTAL ACTIVE				
VOLUME	1	1	1	17	20				
PERCENT .	5%	5%	5%	85%	100%				

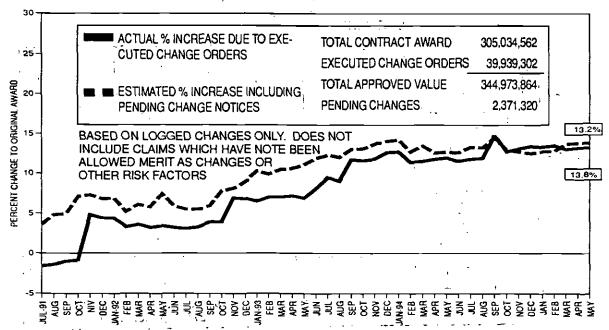
CONSULTANT CONTRACT CHANGE SUMMARY GREEN LINE CONSULTANT CHANGE REQUEST VALUES 20,000 11 TOTAL ESTIMATED VALUE \$17,375 \$849 TOTAL PENDING (ACTIVE) WAITING REVIEW AND APPROVAL) 15,000 \$3,363 TOTAL APPROVED (ACTIVE) DIRECTIVE APPROVED AND ISSUED) \$13,063 TOTAL RESOLVED
(AMENDENT ISSUED OR CANCELLED) 10,000 5,000 0 OKA -61K OCR APPROVED ON 07/20/94 MGL APPRYD CCR STATUS -57K (5,000) AUG 94 SEP 94 **OCT 94** DEC 94 JUN 94 NOV 94 JAN 95 JUL 94 FE8 95 MAR 96 APR 95 MAY 95

# CONSTRUCTION/PROCUREMENT CONTRACT CHANGES Change Notice resolution



AGE OF UNRESOLVED CHANGES									
TIME	0-30 days	31-60 days	61-90 days	90+ days	TOTAL ACTIVE				
VOLUME	35	17	12	59	123				
PERCENT	28%	14%	10%	48	100%				

# CONSTRUCTION/PROCUREMENT CONTRACT CHANGES Change Dollars as a Percentage of Original Contract Award



#### R23 - Metro Green Line

#### CONSTRUCTION/PROCUREMENT CONTRACT CHANGES

#### -CHANGE COST LEVEL BREAKDOWN -

#### **EXECUTED CHANGES AS OF 06/02/95**

Fotal % Total lume Change Cost Change Cost   Change Cost
69% \$4.910.947. <b>7</b> 8 12.30%
69% \$4.910.947.78 12.30%
11,212,211
2. 获证。
95% \$6,385,116.81 15.99%
•
60% \$4,604,070.97 11.53%
86% \$2,519,285.60 6.31%
81% \$2,492,146.07 6.24%
$i_{i}$
12% \$1,350,026.72 3.38%
00% \$39,939,302.41 100.00%
8

#### R23 - Metro Green Line

# CONSTRUCTION/PROCUREMENT CONTRACT CHANGES CHANGE NOTICE BASIS BREAKDOWN

LIST ALL CHANGES TO CONTRACTS

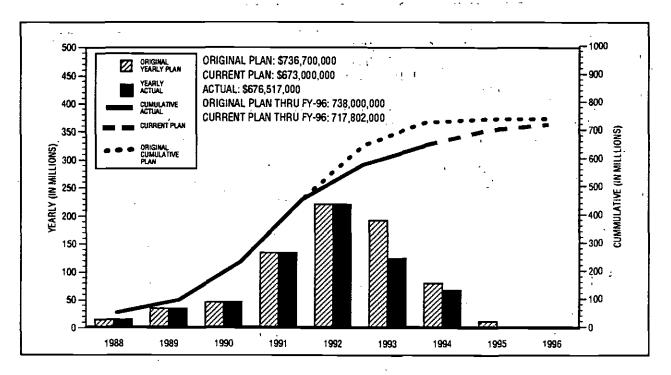
R23C0090 - R23P2020

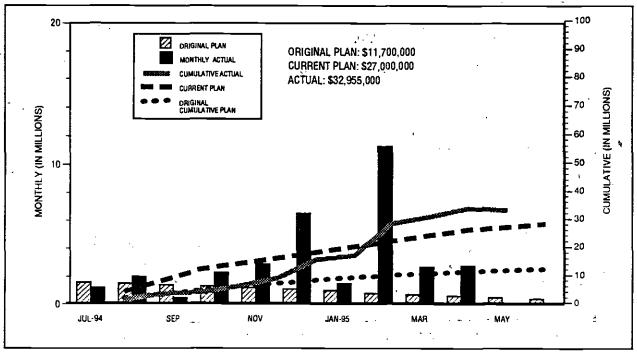
**EXECUTED CHANGES AS OF 06/02/95** 

	# CN'S	% Total _Volume	Change Cost	% Total Change Cost
WORK SCOPE	•			
110 EXTRA WORK 115 ADDITIONAL/NEW WORK 120 DELETION OF WORK 130	136 13 48 1	11.82% 1.13% 4.17% 0.09%	\$2,425,888,06 \$347,968,16 (\$2,725,752,25) \$0.00	6.07% 0.87% -6.82% 0.00%
SCHEDULE CHANGES	198	17.20%	\$48,103.97	0.12%
210 DELAY OF WORK (COMPENSABLE) 220 ACCELERATION OF WORK 230 MILESTONE REVISIONS INON-COMPENSABLE)	34 18 42	2.95% 1.56% 3.65%	\$9,564,691.26 \$1,315,408.00 \$16,300.00	23.95% 3.29% 0.04%
DIFFERING CONDITIONS	94	8.17%	\$10,896,399.26	27.28%
310 DIFFERING SITE CONDITIONS 320 HAZARDOUS MATERIALS 330 SAFETY CONDITIONS	222 1 4	19.29% 0.09% 0.35%	\$9,884,404,42  \$2,313,704,64} \$312,989.00	24.75% -5.79% 0.78%
TERMS AND CONDITIONS	227	19.72%	\$7,883,688.78	19.74%
410 TERMS AND CONDITIONS (OWNER ORIGINATED) 430 EDITORIAL CLARIFICATIONS/DOCUMENT MAINTENANCE	46 62	4.00% 5.39%	\$1,272,694.67 \$0.00	3.19% 0.00%
DESIGN CHANGES	108	9.38%	\$1,272,694.67	3.19%
510 DESIGN CHANGES/ENHANCEMENTS (OWNER ORIGINATED) 515 DESIGN CHANGES/ENHANCEMENTS (EMC ORIGINATED) 520 DESIGN CHANGES/ENHANCEMENTS (MTA OPERATIONS OF CORRECTIONS TO PLANS AND SPECIFICATIONS 540 VALUE ENGINEERING CHANGES (CONTRACTOR ORIGINA	17 3 217 11	12.25% 1.48% 0.26% 18.85% 0.96%	\$5,370,662.08 \$670,215.39 \$0.00 \$2,544,138.72 (\$843,084.76)	13.45% 1.43% 0.00% 6.37% -2.11%
	389	33.80%	\$7,641,931.43	19.13%
MANAGEMENT ISSUES	2	. 0.17%	\$2,375.00	0.01%
620 COMPREHENSIVE CLAIMS	13	1.13%	\$2,375.00 \$572,374.00	1.43%
OUTSIDE AGENCY REQUESTS	15	1.30%	\$574,749.00	1.44%
720 DESIGN CHANGES (OUTSIDE AGENCY ORIGINATED) 730 TERMS AND CONDITIONS (OUTSIDE AGENCY ORIGINAT	52 9	4.52% 0.78%	\$3,272,580.13 \$44,119.62	8.19% 0.11%
CONTRACT OPTIONS	61	5.30%	\$3,316,699.75	8.30%
800 CONTRACT OPTIONS	10	0.87%	\$6,938,932.00	17.37%
· · · · · · · · · · · · · · · · · · ·	10	0.87%	\$6,938,932.00	17.37%
OTHER				
900 OTHER	49	4.26%	\$1,366,103.55	3.42%
	49	4.26%	\$1,366,103.55	3.42%
PROJECT TOTALS:	1151	100.00%	\$39,939,302.41	100.00%

Include all records where (CHGNOTCE-> STAT\_CODE is not equal to "0") and where (CHGORD-> EXECTNDATE is not equal to "\_\_/\_\_\_\_") and where (WORKPKG-> AWARD\_AMT is not equal to "0")

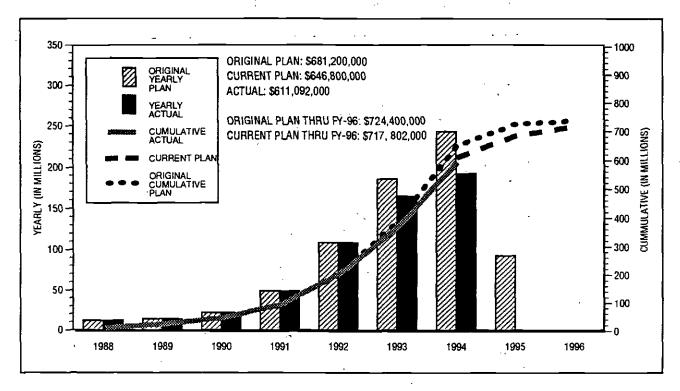
#### PROJECT COMMITMENTS

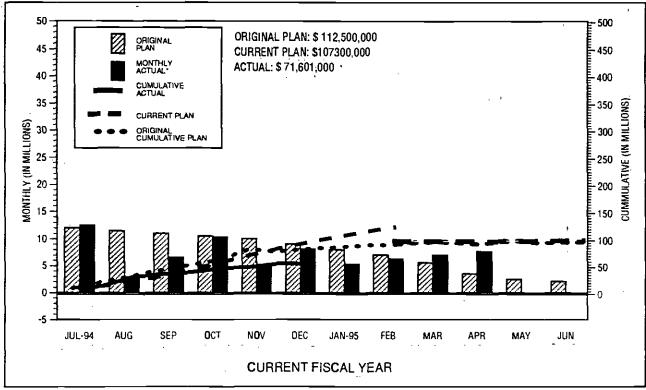




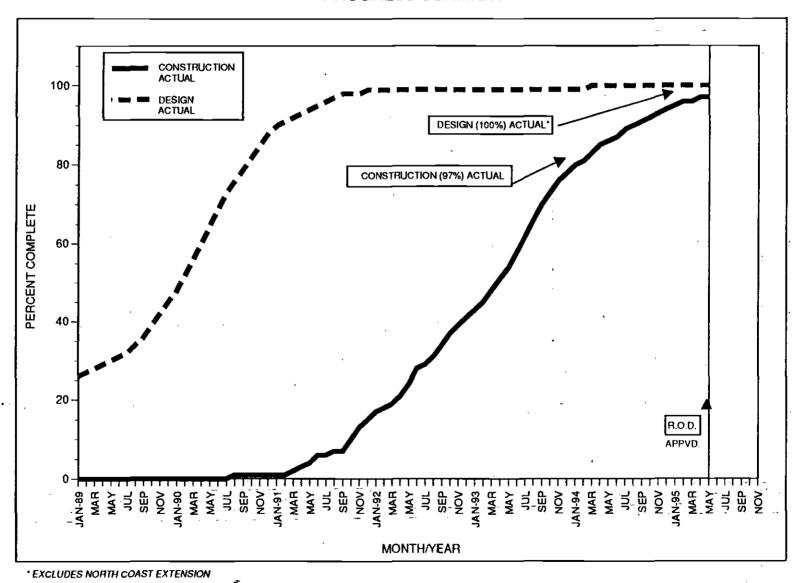
**CURRENT FISCAL YEAR** 

#### PROJECT CASH FLOW





#### PROGRESS SUMMARY

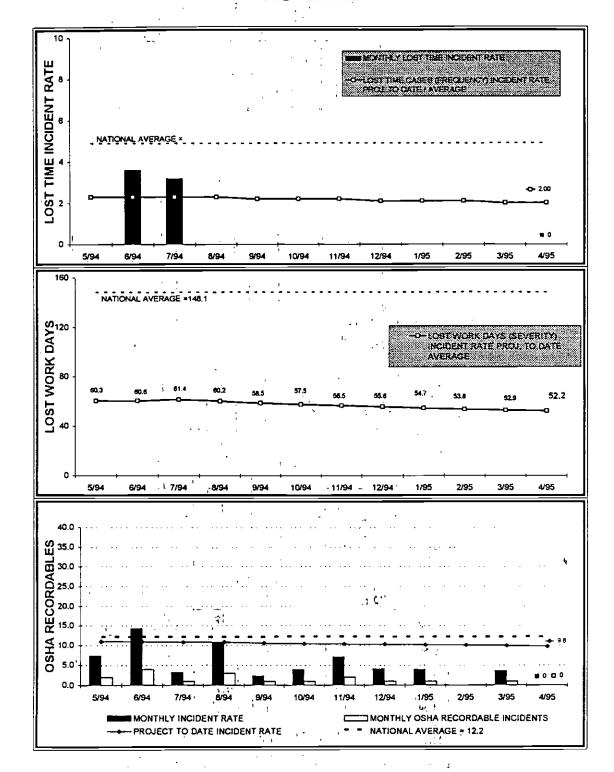


Page

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METRO GREEN LINE SAFETY SUMMARY Prepared by. MASS TRANSIT GROUP



#### LEGEND

0	Open. Action still required.	
	Completed or Not Applicable	

# CONTRACT CLOSE OUT STATUS METRO GREEN LINE

			CLOS	E OUT STA	TUS			
	·	CLAIMS/	FINAL		FINAL	EQUIP.		PROJECTED
CONTRACT	•	CHANGE	PROG.	FINAL	ACCEPT.	FINAL	·	CLOSE-OUT
NUMBER	DESCRIPTION	ORDERS	PAYMENT	RELEASE	CERTIF.	DELIV.	COMMENTS	DATE
C0170	ADA Elevators	0	0	0	÷0			Jun 95
C0400	Main Yard & Shop		0					Jun 95
H0831	SCADA	0	ō	0	0			Jun 95
H0832	CTS	0	0	0	0	•	·	Jun 95
	PIDS	0	0	0	0			Jun 95
H1200	TPSS .	0	0	0	0			Jun 95
	ocs	0	0	. 0	Ō		1	Jun 95
	Fencing/WIDS :	0	0	0	0			Jul 95
	Fare Collection Equipment	0	0	0	0			Jul 95
H0900	SSCS	0	0	0	0			Jul 95
H1310	Signs & Graphics	0	0	0	0			Jul 95
	Miscellaneous Construction	0	0	0	0		<u> </u>	Jul 95
C0501	Systems Facilities Sitework	0	0	0	0			Jul 95
P2020	LRV's - 15 cars	0	0	0	0			Sep 95
H0889	Radios	0	0	0	0			Oct 95
C0100	Guideway Construction	0	0	0	0			Nov 95
H1100	ATC	0	Ō	0	0			Mar 96

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0	
0	
0	METRO RED LINE SEGMENT 1
	EXECUTIVE SUMMARY
	•
0	
0	

#### **METRO RED LINE SEGMENT 1**

The current forecast remains at \$1,450 million. The final Grant Closeout documentation was submitted to the Federal Transit Administration on January 30, 1995.

The following activities are still remaining:

- Continue support and test of Breda vehicles.
- Negotiate closeout of professional services contracts.
- Continue closeout of third party work orders.

#### **Contract Closeout Status**

CONTRACT NUMBER	DESCRIPTION	PROJECTED CLOSEOUT DATE
A610/115	Track Installation	Sep 95
	<u> </u>	
<u> </u>	-	

Closeouts in Process

Closeouts Remaining

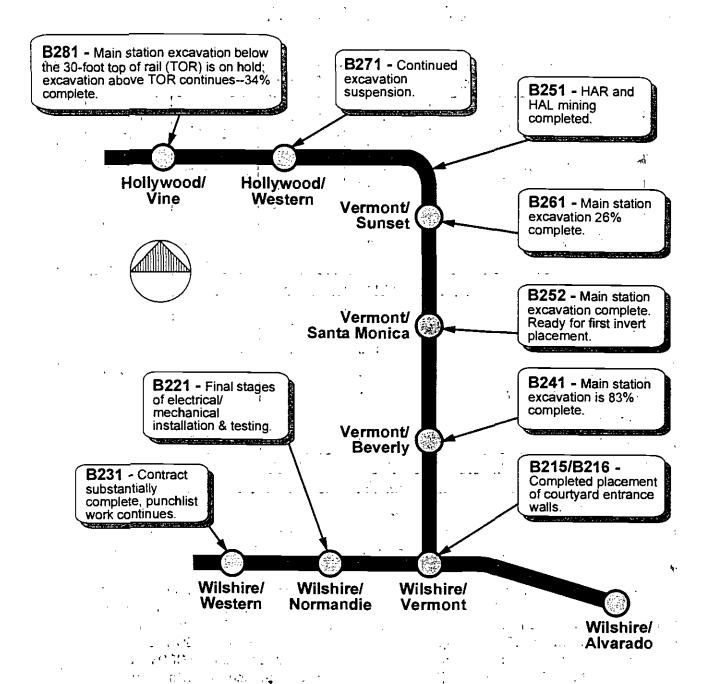
#### **Contract Closeout Analysis**

Final closeout of Contract A610/115 is pending claims litigation.

SEGMENT:

0	METRO RED LINE SEGMENT 2
0	
0	EXECUTIVE SUMMARY
	•

# Major Accomplishments



#### SYSTEMWIDE ACCOMPLISHMENTS

Completed Wilshire trackwork installation (B610). Completed fiber/optic communication cable for right alignment (B620). Radio cable and equipment have been received, proceeding with installation (B641). Public address system passed performance portion of factory performance test (B642). CCTV installation proceeding (B643). Installation of seismic detection is complete (B648A).

MAAC100.PRE

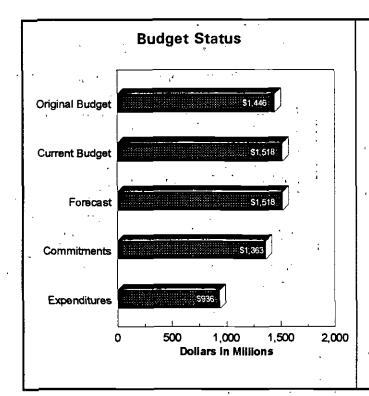
Budge	t/Forecast	: Variance

<u></u>				
COST ELEMENT	CURRENT BUDGET	CURRENT FORECAST	VARIANCE	MAY CHANGE IN FORECAST
CONSTRUCTION	. \$943.2	\$960.8	\$17.6	\$2.0
PROFESSIONAL SERVICES	352.0	349.4	(2.6)	0.0
REAL ESTATE	87.3	89.0	1.7	. 0.0
UTILITY/FORCE ACCOUNT	31.1	34.6	3.5 ·	0.3
SPECIAL PROGRAMS	. 4.4	2.3	(2.1)	0.0
CONTINGENCY	28.6	10.6	(18.0)	(2.3)
PROJECT REVENUE	(0.2)	(0.3)	(0.1)	0.0
TOTAL PROJECT	\$1,446.4	\$1,446.4	\$0.0	\$0.0
NEW REQUIREMENTS				
CONSTRUCTION '	\$52.2	\$50.3	(\$1.9)	\$0.2
PROFESSIONAL SERVICES	15.9	19.1	3.2	0.0
REAL ESTATE	0.0	0.0	0.0	0.0
UTILITY/FORCE ACCOUNT	0.1	0.0	(0.1)	. 0.0
SPECIAL PROGRAMS	0.0	-0.0	0.0	0.0
CONTINGENCY	3.0	2.0	(1.0)	(0.2)
TOTAL NEW REQUIREMENTS	\$71.2	\$71.4	\$0.2	\$0.0
GRAND TOTAL	\$1,517.6	\$1,517.8	\$0.2	\$0.0 <sup>°</sup>

#### **Budget/Forecast Variance Analysis**

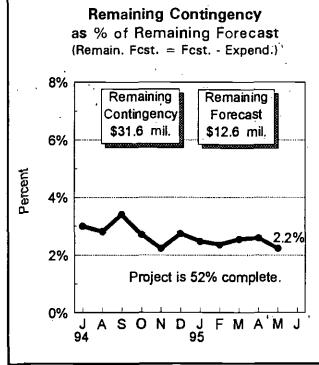
The budget/forecast variance of \$17.6 million in construction is contributed to several contracts. The largest of these concerns are B215, unexpected major design change orders; B221, increases to the potential cost of the station box claim and unit quantity overruns; B261, temporary decking quantity overrun; B271 and B281, delays due to lower station excavation caused by B251; and MC001, contract amendments and approved CCRs. The total project variances is offset by project contingency for a \$0.0 net balance. Total new requirements has a budget variance of \$200K due to costs associated with the Earthquake Impact Program. Project Budget Change Request (PBCR) #14, which will bring the budgets more into alignment with the AFE values, is in the approval cycle.

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#### **Budget Status Analysis**

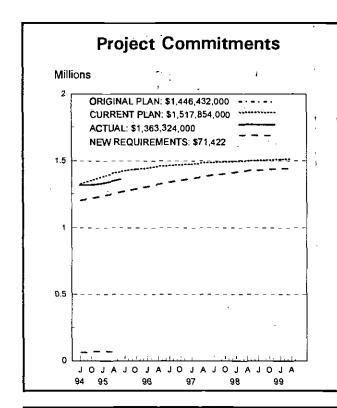
The current budget growth is due to addition of Transit Enhancement and ADA programs to the project. As of May, 45 of 57 construction contracts have been awarded.



#### · · · Remaining Contingency Analysis

The remaining contingency percentage from January 1995 to April 1995 has remained constant, averaging 2.5% with a decrease in May to 2.2%. This is primarily due to offset cost associated with forecast delays to lower excavation for contract B281 due to schedule delays on contract B251.

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#### **Project Commitments Analysis**

Project planned commitments are \$1,412.8 million; actual commitments are \$1,363.3 million or 89.8% of the total forecast. The total increase for May commitments for the period are \$15.1 million. This primarily consists of the award of construction contract B290, Construction Support and Maintenance. This commitment is 9.6 Also in Professional Services. million. contract MY001, Project Administration commitments increased 4.2 million to bring commitments into balance with expenditures.

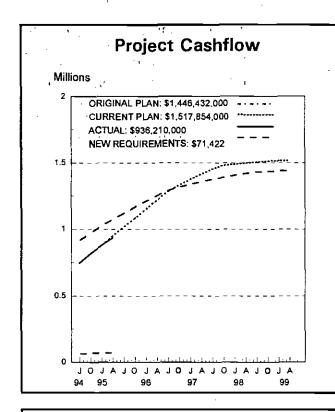
# Millions 150 FISCAL YEAR BUDGET: \$282,200,000 PLANNED COMMITMENTS: ACTUAL COMMITMENTS: 50 J A S O N D J F M A M J

#### Fiscal Year Commitment Analysis

Planned commitments are \$100.7 million; actual commitments are \$51.2 million\*. The reasons for the variance is due to forecast, schedule delays, and contingencies in the forecast. Final Change Orders have not been executed.

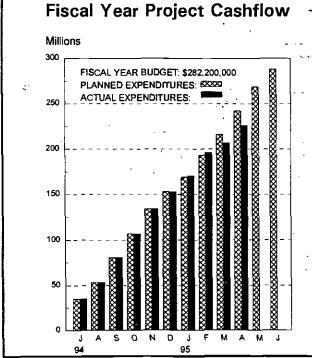
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<sup>\*</sup>This section includes new requirements.



#### **Project Cashflow Analysis**

Project planned cumulative expenditures for the month are \$952.2 million; actual expenditures are \$936.2 million or 61.7% of the total forecast. The project will be at 90 to 95% of the Fiscal Year budget by the end of the year, partly due to the slow down of construction toward the end of the year.

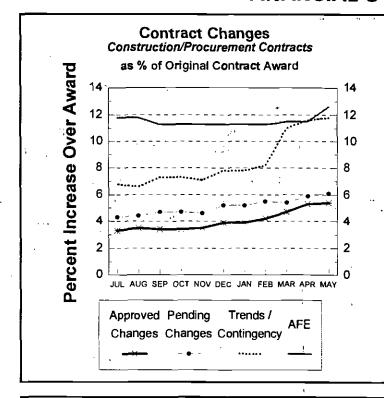


#### Fiscal Year Cashflow Analysis

Planned fiscal year cumulative expenditures for the month are \$242.1 million; actual expenditures are \$226.1 million\*. The underrunning the past couple of months is associated with the delays in construction.

\*This section includes new requirements.

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#### **Contract Changes Analysis**

The 1.1% increase in May to the AFE is due to construction contract B221. There was a Board Approved AFE increase of 8 million dollars. The sharp spike in contingency in March 1995 is attributed to an increase in pending changes becoming approved.

#### Construction Procurement Contracts

#### **Contract Cost and Forecast**

Comparison to Budget

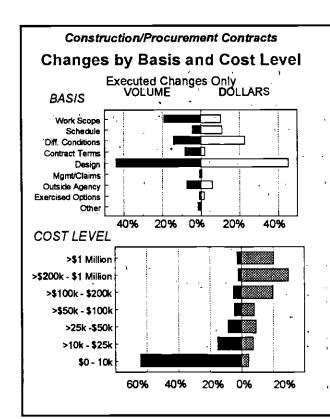
Doltars in Millions	Current	Previous	Variance
Original Contract Award	\$776.4	\$776.4	\$0.0
Approved Contract Value*	\$42.2	\$40.8	\$1.4
Current Value	\$818.6	\$817.2	\$1.4
Pending Logged Changes	\$4.8	\$4.7	\$0.1
Trends and Contingency	\$694.4	\$695.9	\$<1.5>
Total Forecast	\$1,517.8	\$1,517.8	\$0.0
Constr. Budget	\$995.5	\$995.5	\$0.0

## \*Includes by Executed Change Orders and Approved Not-to-Exceed Costs. forecast and Budget for Awarded contracts only.

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#### **Contract Forecast Analysis**

Increase of \$1.4 million in the approved contract and current value is primarily due to Contract B252 increase of \$723.9K, consisting of Executed Change Notice No. 12.00 and 43.00, as well as WACN No. 42.01. Also contributing to the increase is the Contract B281 increase of \$561.5K, consisting of Executed Change Notice No. 17.01 and 34.00. The remaining variance is attributed to various construction contracts.

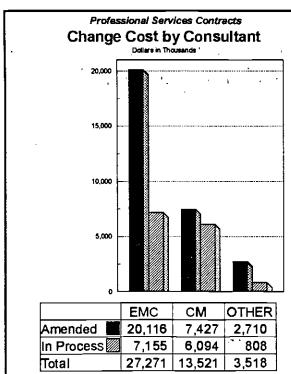


#### Change Basis Analysis

Design changes represent approximately 44% of the basis for change and 45% of the total change cost. Changes in work scope and differing site conditions represent approximately 33% of the basis for changes and 34% of the total change cost.

#### Change Cost Level Analysis

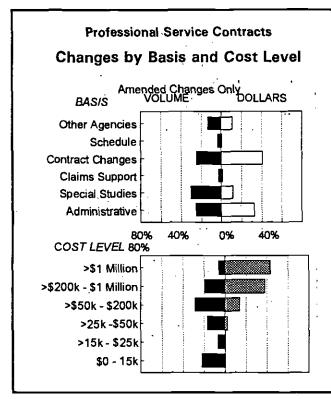
- 51% of the total change cost falls within the MTA Board Authority, which equals 2.5% of the change volume
- 28% of the total change cost falls within the MTA CCB authority, which equates to 10% of the change volume
- 9% of the total change cost falls within the CM authority, which equates to 8.5% of the change volume
- 12% of the total change cost falls within the RE authority, which equates to 79% of change volume



#### **Professional Services Change Analysis**

Seven Advanced Work Authorizations (AWAs) were assigned this period with a total not-to-exceed obligation of \$100k. No contract amendments were approved this period.

Data source: CCS (CCR Reports)



#### Change Basis Analysis

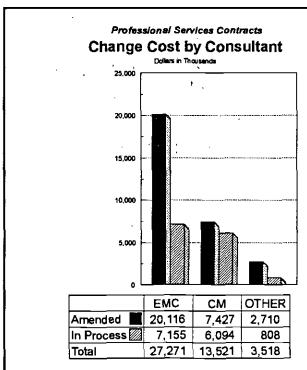
Approximately 41% of Red Line Segment 2 Consultant Change Requests (CCR) total basis value is due to changes during the design phase of non-awarded construction contracts and 32% for Administrative changes. 30% of the total basis volume is for Special Studies with 25% each for Design/Construction and Administrative changes.

Cost recovery on changes due to outside agencies is currently under review. A cost recovery estimate will be reported on when available.

#### **Change Cost Level Analysis**

81% of the total change cost falls within the MTA Board authority level which equates to approximately 25% of the change volume.

75% of the change volume falls within the Project Manager's approval authority which equates to only 19% of the total change value.



#### **Professional Services Change Analysis**

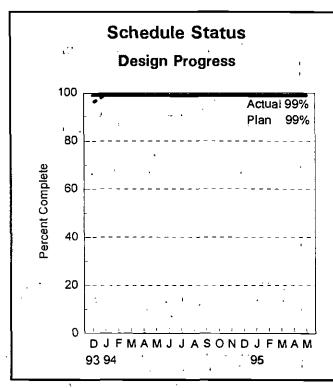
Seven Advanced Work Authorizations (AWA) were assigned this period with a total not-to-exceed obligation of \$100k. No contract amendments were approved this period.

DATA SOURCE:

CCS: CCR REPORTS

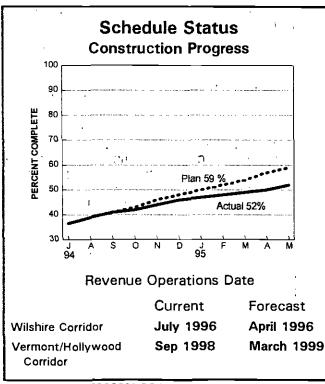
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#### **SCHEDULE STATUS**



# Design Schedule Progress Analysis

The EMC continues to report design work at 99% complete, with two contracts remaining in design. These contracts are Contract B263, Vermont/Sunset Station-Second Entrance, and Contract B648B, Communications Installation-Vermont/Hollywood Corridor. The continuing design support services during construction is not included in this chart.



#### Construction Schedule Progress Analysis

The overall construction progress is 7% behind schedule due to tunnel delays under Hollywood Boulevard. In addition, all station contracts are behind schedule due to unforeseen conditions, design changes and slower production rates for station excavation and support of utilities than planned.

Wilshire Corridor is 3 months ahead of schedule due to better than planned facility and system coordination.

Vermont/Hollywood Corridor is behind schedule by 5 months due to B251 tunneling delays under Hollywood Boulevard.

Major accomplishments include completed Hollywood tunnels mining and completed fiber optic communication cable for Wilshire Corridor.

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#### **SCHEDULE STATUS**

#### **Current Critical Path**

#### Wilshire Corridor

The critical path currently is 88 days ahead (positive float)

B646, Fire & Emergency Management, equipment delivery to B648A contractor.

B648A, Communication Installation, installation and testing of emergency trip system (ETS).

System integration testing.

#### Vermont/Hollywood Corridor

The critical path currently is 155 days behind (negative float)

B251 Vermont/Hollywood Tunnel is on the Critical Path through 10/03/95.

B271 Hollywood/Western Station is on the Critical Path from 10/04/95 through 02/10/97.

#### **Current Critical Path Analysis**

Wilshire Corridor forecasted ROD was changed from 03/12/96 to 04/19/96, due to budget and activity sequence for system integration testing.

Other critical path activities are system integration testing and pre-revenue operations.

<u>Vermont/Hollywood Corridor</u> delayed forecast ROD is due to late Notice to Proceed of station contracts, delay in tunnel mining.

Other critical path contracts are: Contract B610, Trackwork Installation, concrete plinth, rail installation and testing; Contract B620, Automatic Train Control, wayside installation, operation tests and dynamic testing.

#### 3 Month Contract Schedule

#### Contract Description

**Advertise Date** 

None:

N/A

#### 3 Month Contract Schedule Analysis

There are 2 remaining contracts for Vermont/Hollywood Corridor, B263 Second Entrance Vermont/Sunset Station and B648B Communication Installation for Vermont/Hollywood Corridor. These contracts will be advertised in 1996.

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## **SCHEDULE STATUS**

### Real Estate Status

	Number of parcels	Number of parcels available
This month	89	89
Last month	. 89	88

## Real Estate Analysis

Number of parcels acquired 89.

Number of parcels to be acquired 0.

## Contract Closeout Status

Contract Number	Description	Projected Closeout Date
B201	Pocket Track & Tunnel	Jul. 1995
B211	Wilshire/Vermont Stat.	Jul. 1995
B231	Wilshire/Western Stat.	Aug. 1995
B221	Wilshire/Normandie Stat.	Nov. 1995
B752	Metcalf & Eddy	TBD
B754	Dames & Moore	TBD ',
B756	Barsotti	TBD

Closeouts completed

~ O

Closeouts in process

7

Closeouts remaining

7

## Contract Closeout Analysis

The closeout of Contracts B201, B211 and B231 are delayed by change orders and claims.

The closeout of Contracts B752, B754, and B756 are pending final audits.

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#### AREAS OF CONCERN

#### NEW

#### Item

Contract B646, Fire and Emergency Management

#### Concern/Impact

Delivery of equipment delayed by four months, impacting B648A contractors installation schedule, and start of System Integrated Testing.

#### Status/Action

Request recovery plan from B646 contractor. Contractor to prepare and submit schedule.

#### ONGOING

#### **Item**

Contract B221, Wilshire/Normandie Station & Contract B215, Wilshire/Vermont Station, Permanent Power Availability

#### Concern/Impact

The potential for the earliest completion of the Wilshire Corridor depends upon beginning systems integration testing at the earliest window of availability. Many of the tests require the use of permanent power. Any new electrical changes to Wilshire Corridor Stations could impact the permanent power availability.

#### Status/Action

Strong communication with DWP needs to be made to stress the importance of its contribution to the overall system completion.

Contract B221: DWP is scheduled to complete work to facilitate permanent power\_by early June 1995. The B631 contractor awaiting completion of facility electrical changes is scheduled to have permanent power activation early June 1995.

Contract B215: DWP has accepted and is working in the room with condition that the door hardware must be installed before energization. DWP is scheduled to complete work to facilitate permanent power by late June 1995. The B631 contractor is scheduled to have permanent power activation by mid-July 1995.

### AREAS OF CONCERN (CON'T)

#### Item

Vermont/Hollywood Corridor Cost Containment

#### Concern/Impact

Wilshire Corridor station contracts experienced an average rate of cost growth in excess of ten percent. Continued escalation at the present rate would jeopardize remaining contingency.

#### Status/Action

Develop a cost containment plan for Vermont/Hollywood station contracts to maintain the budget and the ten percent cost growth limit.

Parsons-Dillingham developed and submitted to MTA a list of proposed cost reduction items. MTA has established a panel to review recommendations and select candidate items to pursue with management.

#### Item

Forecasted Delay to Revenue Operation Date (ROD) - Vermont/Hollywood Corridor

#### Concern/Impact

The Vermont/Hollywood Corridor Revenue Operation Date (ROD) forecast continues to be later than the planned date of September 28, 1998. This is primarily due to Hollywood tunnel excavation delays. The critical path runs through the Hollywood Boulevard implementation activities, HAR and HAL tunneling, tunnel concrete placement between Vine and Western, and Contract B271, Hollywood/Western Station, lower station excavation access.

#### Status/Action

Perform detailed program review based on current production rates to forecast minimum ROD slippage.

The Hollywood Tunnel mining started on January 6, 1995, for HAR tunnel, and the HAL tunnel mining started on February 3, 1995, and were completed May 22 and 24, 1995. Contract B271 work has been suspended to avoid additional costs due to early mobilization of station excavation equipment and labor. Contract B281 has been given a work restriction for the station lower excavation work, but this restriction will not impact the Vermont/Hollywood critical path. The B251 contractor is being directed to provide the necessary resources to prosecute the work that must be done on a concurrent basis to achieve required progress against the schedule. The B251 scope of work required prior to beginning lower station excavation on Hollywood is being evaluated by Segment 2 and Segment 3 teams, who are preparing options to minimize cost and schedule impact.

#### AREAS OF OPPORTUNITY

#### **ONGOING**

#### *Item*

Wilshire Corridor ROD

#### **Opportunity**

Achieve earliest possible ROD without incurring additional cost.

#### Status/Action

Continue to manage current master schedule plan.

Current master schedule forecasts that Wilshire Corridor pre-revenue operations could commence in March 1996, with ROD as early as April 1996.

#### ltem'

**Systemwide** 

#### **Opportunity**

Ability for systems integration testing to begin as early as possible.

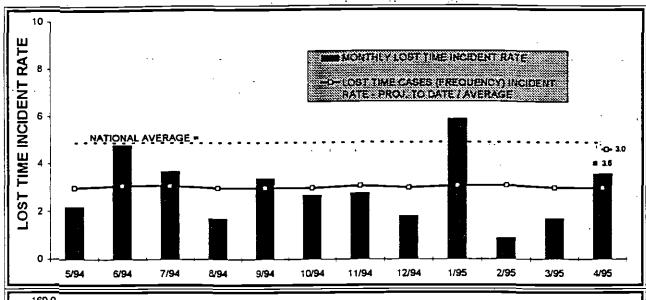
#### Status/Action

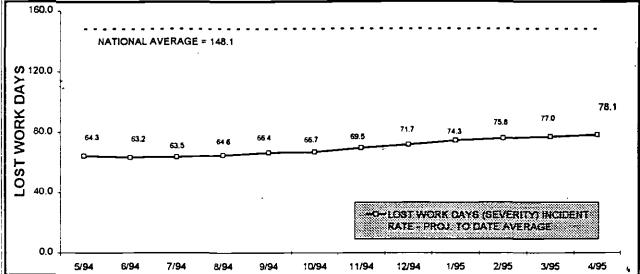
Ensure MTA Operations staff is available to support early August 1995 systems integration testing.

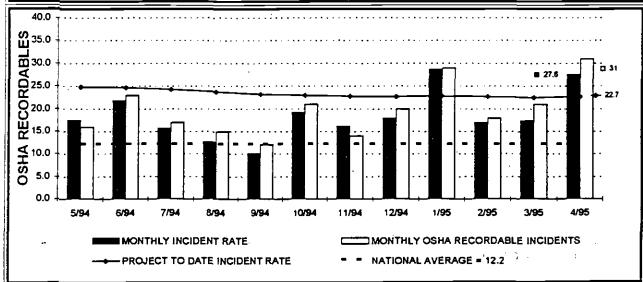
Required MTA operations staff is planned to be available for all tests. Back up plan is to use available contractor support to maintain test schedule. B290, B620, and B631 contractors installation to be ready to support initial systems testing July 1995. The system integration testing overall duration increased due to budget and crew restraints.

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## METRO RED LINE SEGMENT II SAFETY SUMMARY







## **SAFETY SUMMARY STATUS**

<u></u>						
SAFETY SUMMARY ANALYSIS						
This information was not available at the time of publication.						
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## PROJECT STAFFING STATUS

#### TOTAL STAFFING

The MTA will produce this graph for June 1995 report.

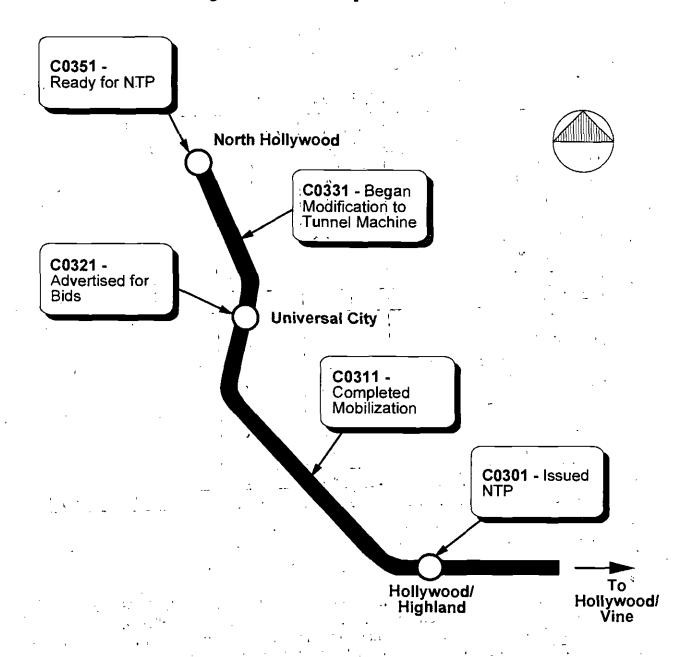
### **STAFFING ANALYSIS**

Additional professional services data is required before the Project Staffing Analysis can be completed.

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METRO RED LINE SEGMENT 3 NORTH HOLLYWOOD EXTENSION EXECUTIVE SUMMARY

## **Major Accomplishments**



## SYSTEMWIDE ACCOMPLISHMENTS

Tunnel excavation in Hollywood was completed to the foot of the Hollywood Hills.

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Work began on the C0301 Contract, Hollywood/Highland Station and tunnels with issuance of Notice To Proceed.

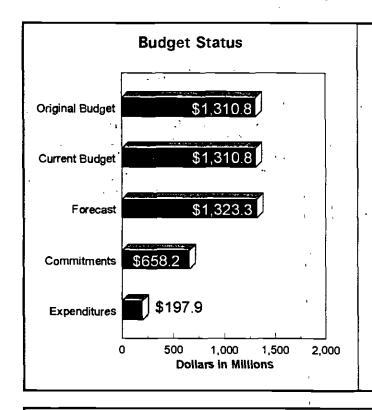
Budget/Forecast	٧	ariai	псе
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COST ELEMENT	CURRENT BUDGET	CURRENT FORECAST	VARIANCE	MAY CHANGE IN FORECAST
CONSTRUCTION	\$766.9	\$770.3	\$3.4	0.0
PROFESSIONAL SERVICES	279.1	279.6	0.5	0.0
REAL ESTATE	. 85.6 ·	86.4	0.8	0.0
UTILITY/FORCE ACCOUNT	18.7	23.3	4.6	0.0
SPECIAL PROGRAMS	0.0	0.0	0.0	. 0.0
CONTINGENCY	160.5	151.2	(9.3)	0.0
PROJECT REVENUE	0.0	0.0	0.0	- 0.0
TOTAL PROJECT	\$1,310.8	\$1,310.8	\$0.0	\$0.0
NEW REQUIREMENTS	``		_	_
CONSTRUCTION	\$0.0	\$11.7	\$11.7	\$0.0
PROFESSIONAL SERVICES	0.0	0.8	0.8	0.0
REAL ESTATE	0.0	0.1	0.0	0.0
UTILITY/FORCE ACCOUNT	0.0	0.0	. 0.0	0.0
SPECIAL PROGRAMS	0.0	0.0	0.0	0.0
CONTINGENCY	0.0	0.0	0.0	0.0
TOTAL NEW REQUIREMENTS	\$0.0	, \$12.6	\$12.5	\$0.0
GRAND TOTAL	\$1,310.8	\$1,323.4	\$12.5	\$0.0

## **Budget/Forecast Variance Analysis**

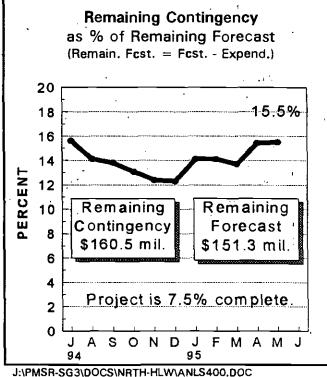
The budget/forecast variance is primarily due to construction and Utility/Force account contracts. The increase to construction Contract B251 was due to allocation of various WACNs and pending changes to new requirements for tunnel settlement. Also, Contract B251 increased due to additional potential changes for compaction grouting on Hollywood Boulevard and additional contingency for Hollywood settlement issues that may not be insurance reimbursable. Regarding Utility/Force accounts, increase was primarily due to electrical work at the North Hollywood Station site resulting from soil conditions, altered requirements, and the Contract C0351 tail track extension. The increase was also due to the allocation of costs for cable relocation work.

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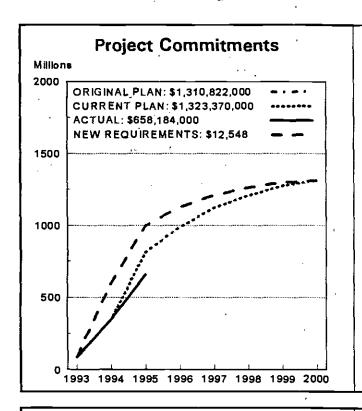
#### **Budget Status Analysis**

No changes in the current budget. Forecast increase due to New Requirements for the Art Program, Non-Revenue Connector, earthquake impacts, and Hollywood Boulevard tunnel settlement related charges which may largely be eligible for insurance reimbursements.



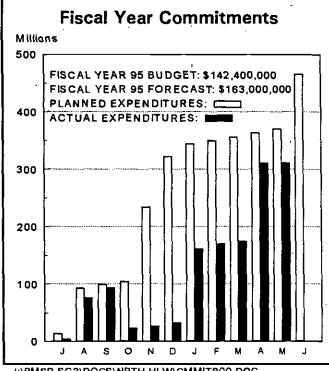
### Remaining Contingency Analysis

The remaining contingency percentage from January 1995 to May 1995 has averaged 14.6%. Status has remained constant throughout Fiscal Year 1995.



### Project Commitments Analysis

Project planned cumulative commitments for the month are \$1,310.8 million; actual commitments are \$658.2 million or 50.2% of the total forecast. Commitments will be more in line with planned as contracts are awarded in 1996 and 1997.

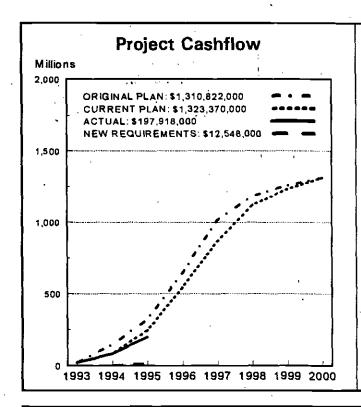


### Fiscal Year Commitment Analysis

Planned fiscal year cumulative commitments are \$370.0 million; actual cumulative commitments \$311.1 are million.\* Under-run in commitments are due to schedule delays and final change orders which have not been executed. Commitments increased in April 1995 due to the award of construction Contract C0301.

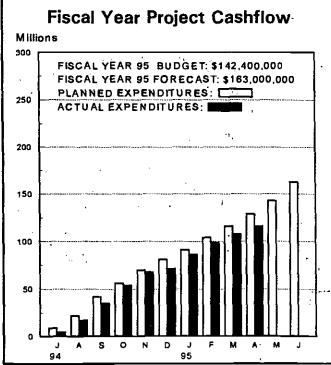
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<sup>\*</sup>This section includes new requirements.



### **Project Cashflow Analysis**

Project planned cumulative expenditures for the month are \$1,310.8 million; actual expenditures are \$197.9 million or 15.1% of the total forecast. Expenditures are expected to peak Fiscal Years 1996 and 1997; the major contracts are just now being awarded.

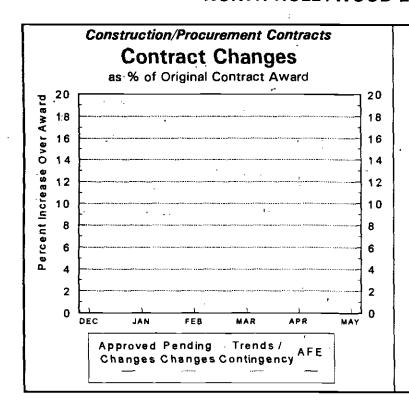


### Fiscal Year Cashflow Analysis

Planned fiscal year cumulative expenditures for the month are \$128.4 million; actual cumulative expenditures are \$116.2 million.\* The underrun during the past couple of months is primarily from construction Contract C0331; delays due to site soil conditions different than expected.

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<sup>\*</sup>This section includes new requirements.



#### **Contract Changes Analysis**

The history for the Approved Changes, Pending Changes, Trends/ Contingency, and AFE is unavailable. The figures for May 1995 are as follows:

 Approved Changes
 0.4%

 Pending Changes
 0.9%

 Trends/Cont
 14.1%

 AFE
 10.0%

# Construction Procurement Contracts Contract Cost and Forecast

Comparison to Budget

Dollars in Millions	Current	Previous	Variance:
Original Contract Award	\$433.8	\$433.8	\$0.0
Approved Contract Value*	\$1.9	\$2.0	(\$0:1)
Current Value	∜ \$435.7	\$435.8	(\$0.1)
Pending Logged Changes	\$2.2	\$1.4	\$0.8
Trends and Contingency	\$61.0	\$61.7	(\$0.7)
Total Fore- cast	\$498.9	\$498.9	\$0.0
Constr. Budget	\$543.0	. \$543.0	\$0.0

\*Includes Executed Change Orders and Approved Not-to-Exceed Costs. forecast and Budget for Awarded contracts only.

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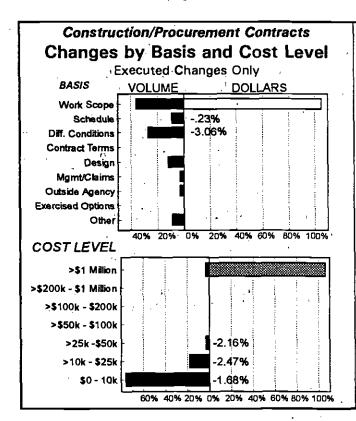
#### **Contract Forecast Analysis**

Trends/Contingency not marked since Contingency over Award Value is below 100%.

History not available at this time.

Increase in Pending due to Contract B614, CNN #003.00, revise unit quantities for Base 2 special trackwork for \$.7 million.

Slight decrease in Contingency due to pending changes being approved.

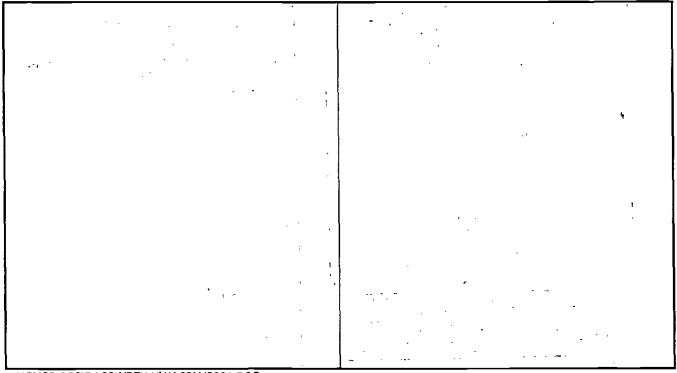


#### **Change Basis Analysis**

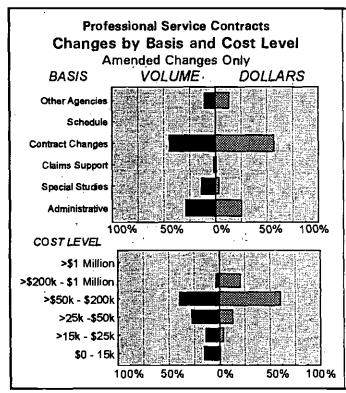
Changes in work scope represent approximately 36% of the basis for change and 105% of the total change cost. Differing site conditions represent 27% of the basis for change and -3% of the total change cost.

#### **Change Cost Level Analysis**

- 106% of the total change cost falls within the MTA Board Authority, which equals 3% of the change volume
- -2% of the total change cost falls within the CM authority, which equates to 3% of the change volume
- -4% of the total change cost falls within the RE authority, which equates to 94% of change volume



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#### Change Basis Analysis

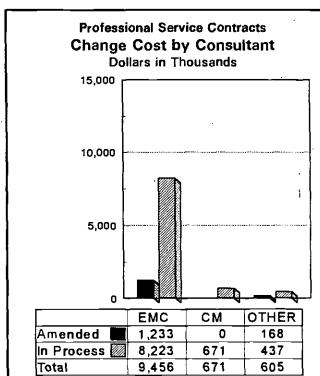
North Hollywood Consultant Change Requests (CCR) are primarily due to changes during the design phase of non-awarded construction contracts accounting for approximately 45% of the total contract change volume and 57% of the total contract change value.

Cost recovery on changes due to outside agencies is currently under review. A cost recovery estimate will be reported on when available.

#### Change Cost Level Analysis

82% of the total change cost falls within the MTA Board authority level which equates to 43% of the overall change volume.

57% of the change volume falls within the Project Manager's approval authority which equates to 18% of the overall change value.



#### **Professional Services Change Analysis**

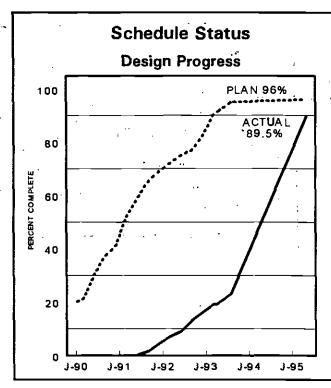
Six Advanced Work Authorizations (AWA) were assigned this period with a total not-to-exceed obligation of \$225K. No contract amendments were approved this period.

DATA SOURCE:

CCS: CCR REPORTS

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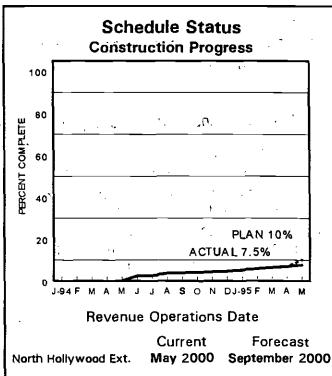
## SCHEDULE STATUS NORTH HOLLYWOOD EXTENSION



# Design Schedule Progress Analysis

The overall design through May 26, 1995, was 89.5% complete. Active design efforts are underway for the following contracts: C0352, C1610, B612, B620 and H0631. Work is underway to repackage Contract C0326.

Remaining design work is taking place on the above contracts and the various Systems contracts.



## Construction Schedule Progress Analysis

Overall, construction of the North Hollywood Extension is 133 days behind schedule. Changes during design of the critical facility contracts caused the delay.

MTA staff and consultants are studying alternative mitigation measures. Resequencing of trackwork activities and testing of systems are expected to result in sufficient time savings to return the Project to a timely Revenue Operations Date (ROD).

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## SCHEDULE STATUS NORTH HOLLYWOOD EXTENSION

#### **Current Critical Path**

The critical path currently is 133 days behind (negative float)

CO311 is on the critical path through March 30, 1998.

#### **Current Critical Path Analysis**

Currently, the critical path begins with Contract C0311, the tunnel between Station 630+00 and Universal City Station. The late design and award of this contract has left the Project over four months behind schedule.

Efforts are underway to mitigate the delays by resequencing the trackwork activities. We expect the resequencing to put the revenue operations date back on schedule.

#### 3 Month Contract Schedule

#### Contract Description

#### Award Date

C0321

08/23/95

#### 3 Month Contract Schedule Analysis

Contract C0321, Universal City Station, bids are scheduled to be opened on June 22, 1995. The contract is scheduled to be awarded at the August MTA Board meeting.

No other contracts are scheduled for bidding during the next ninety days.

Contract C0301, which was awarded last month is scheduled to receive Notice to Proceed on June 1, 1995.

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# SCHEDULE STATUS NORTH HOLLYWOOD EXTENSION

## **Real Estate Status**

	Number of parcels	Number of parcels available
This month	232	78
Last month	232	66

## Real Estate Analysis

Number of parcels acquired is 78.

Number of parcels to be acquired is 154.

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## AREAS OF CONCERN NORTH HOLLYWOOD EXTENSION

NEW

NONE

#### ONGOING

#### Item

Contracts C0301R, Hollywood/Highland Station and Tunnels; C0321, Universal City Station; C0351, North Hollywood Station with Crossover and Tailtrack

### Concern/Impact

Re-design of selected ventilation shafts can save construction costs estimated at \$1-2 million. Design must be completed in time to avoid delays to Contractor's station excavation.

#### Status/Action

EMC to complete analysis and potential cost savings estimate for MTA evaluation in a timely manner so that re-design can commence.

EMC and P-D have prepared cost and construction schedule analysis. The MTA must authorize the re-design and construction prior to any action by EMC and Parsons-Dillingham.

#### ltem

Systems Schedule Re-baseline

### Concern/Impact

The EMC has developed a new baseline for Systems procurement contracts and for the remaining Systems design contracts. The new schedules reflect delays and changes in the Facilities contracts and establish a viable baseline to accomplish the work. There exist differences of opinion between the MTA and the EMC as to the timing and validity of the plan to accomplish this work.

## AREAS OF CONCERN (CON'T) NORTH HOLLYWOOD EXTENSION

#### Status/Action

The EMC prepared the schedule for submittal to the MTA for approval in early April.

Systems is currently proceeding with the baseline work as described in the record of negotiations and the CUD based on the revised schedule. Negotiations with the MTA for the remaining work and approval the revised schedule are continuing. The out-of-scope work due to iterations in the facilities design changes, technical changes to the Systems contracts brought on by these changes and work now considered unavoidable in completing the Systems contracts has been identified. EMC has transmitted this scope along with an estimate of the man-hours to complete the work to MTA. The MTA will advise EMC as to when to proceed and will define the work authorized.

#### Item

Contract C0331, Line Section North Hollywood to Universal City

#### Concern/Impact

The start of tunnel mining was delayed due to the Contractor's delay in assembling the tunnel shield machines (TSM). There is a concern that continued delays will further erode schedule "float" for this contract and follow-on integrated contracts. In addition, the mining operation must be conducted to ensure against ground settlement.

#### Status/Action

The MTA and its consultants are taking all necessary steps to ensure that the mining operation is started and progresses in a manner to ensure against ground settlement. This is to ensure the mining operation is implemented per specification procedures.

Tunnel mining has been repeatedly halted due to Contractor's technical difficulties. The Contractor modified one of the tunneling machines to prevent loss of ground.

# AREAS OF CONCERN (CON'T) NORTH HOLLYWOOD EXTENSION

#### Item

Contract C0351, North Hollywood Station with Crossover and Tail track

### Concern/Impact

Access to crossover area, the C0331 Contractor must complete mining operations and this operation is encountering difficulties and delays.

#### Status/Action

The C0351 Contractor could be directed to delay taking access.

The C0331 Contractor's mining operation is being closely monitored and the Contractor has been requested to provide a mitigation plan to recover schedule delays. The MTA and Contractor have agreed to modify the tunneling machine to prevent loss of ground. The C351 access milestones will need to be adjusted after the Contractor submits the baseline schedule.

#### **RESOLVED FROM LAST MONTH**

#### Item

Contract C0321 Universal City Station - Section Designer Recovery Plan

## Concern/Impact

The recovery plan submitted by the Section Designer involved an ambitious schedule. Achieving the planned milestones has required close coordination between the Section Designer and the EMC and the use of overtime. Inefficiencies have resulted, with repeated projected cost increases on the part of the Section Designer.

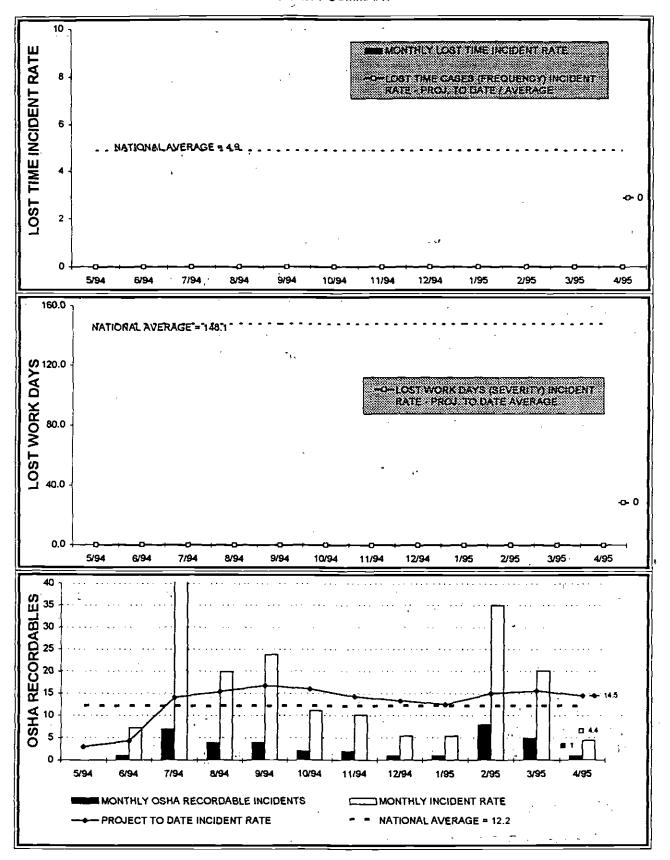
#### Status/Action .

In an attempt to meet the schedule requirements, the Section Designer has maintained full mobilization. The EMC is preparing a comprehensive analysis of the variance between actual costs and planned costs, identifying portions attributable to out-of-scope work and overruns. This will be available at the end of May.

Final Design on C0321 completed on April 28, 1995.

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METRO RED LINE SEGMENT III SAFETY SUMMARY Prepared by: MASS TRANSIT GROUP



# SAFETY SUMMARY STATUS NORTH HOLLYWOOD EXTENSION

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## PROJECT STAFFING STATUS NORTH HOLLYWOOD EXTENSION

### **TOTAL STAFFING**

The MTA will produce this graph for June 1995 report.

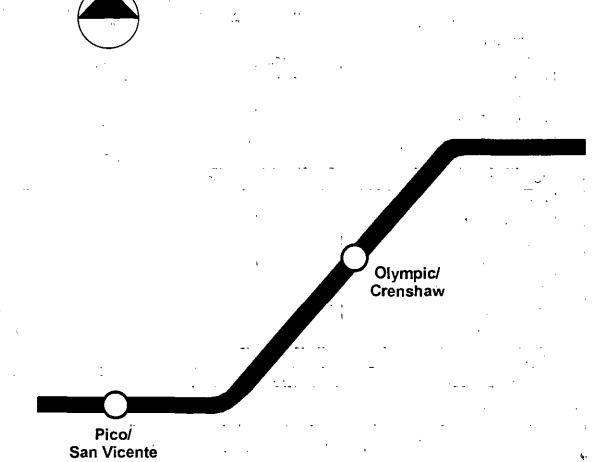
### STAFFING ANALYSIS

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METRO RED LINE SEGMENT 3 MID CITY EXTENSION EXECUTIVE SUMMARY

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## **Major Accomplishments**



## **SYSTEMWIDE ACCOMPLISHMENTS**

Mid City Extension status is in the EIR/EIS phase. A number of charts have not been furnished at this time since Mid City has not gone into full engineering and development.

# FINANCIAL STATUS MID CITY EXTENSION

## **Budget/Forecast Variance**

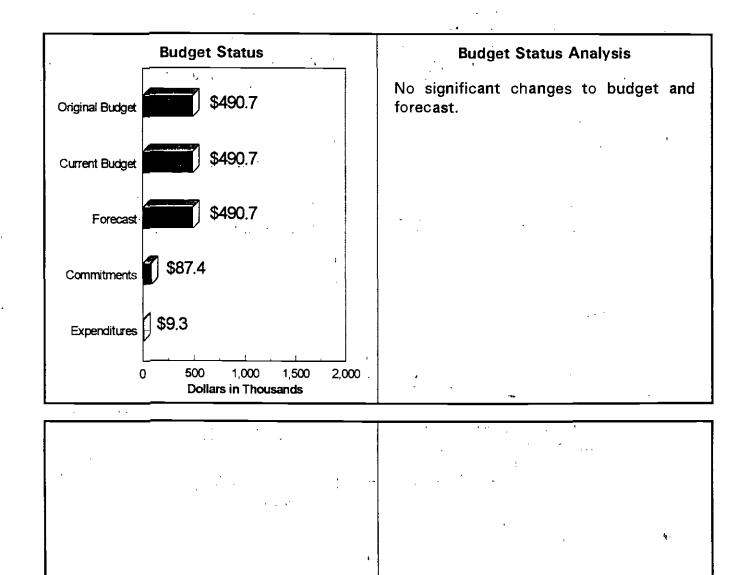
COST ELEMENT	CURRENT BUDGET	CURRENT FORECAST	VARIANCE	MAY CHANGE IN FORECAST
CONSTRUCTION	\$334,139	\$328,119	(\$6,020)	\$0
PROFESSIONAL SERVICES	98,133	102,980	4,847	0
REAL ESTATE	53,303	48,543	(4,760)	0
UTILITY/FORCE ACCOUNT	5,088	5,088	0	o
SPECIAL PROGRAMS	o	o	0	0
CONTINGENCY	0	. о	0	0
PROJECT REVENUE	0	5,933	5,933	0
TOTAL PROJECT	\$490,663	\$490,663	\$0	\$0
NEW REQUIREMENTS		_		
CONSTRUCTION	\$0	\$0	\$0	\$0
PROFESSIONAL SERVICES '	o	0	0	0
REAL ESTATE	0	0	0	0
UTILITY/FORCE ACCOUNT	0	0	0	0
SPECIAL PROGRAMS	0	0	0	0
CONTINGENCY	o	o	o	0
TOTAL NEW REQUIREMENTS	\$0	. \$0	\$0	\$0
GRAND TOTAL	\$490,663	\$490,663	\$0	\$0

## **Budget/Forecast Variance Analysis**

No changes were applicable for this period.

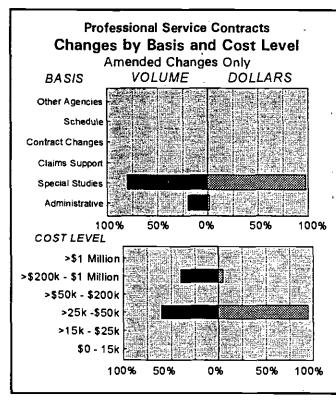
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# FINANCIAL STATUS MID CITY EXTENSION



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## FINANCIAL STATUS MID CITY EXTENSION



#### Change Basis Analysis

Approximately 80% of Red Line Segment Mid City change volume and 98% of the change value is due to Special Studies.

#### Change Cost Level Analysis

95% of the total change cost falls within the MTA Board authority level which equates to 40% of the change volume.

60% of the change volume falls within the Project Manager's approval authority which equates to only 5% of the total change value.

### **Professional Service Contracts** Change Cost by Consultant Dollars in Thousands 100 80 60 40 20 OTHER **EMC** CM Amended | 0 0 In Process 🌌 1,884 31 0 31 0 Total 1,884

### **Professional Services Change Analysis**

One Advanced Work Authorization (AWA) was assigned this period with a total not-to-exceed obligation of \$27K. No contract amendments were approved this period.

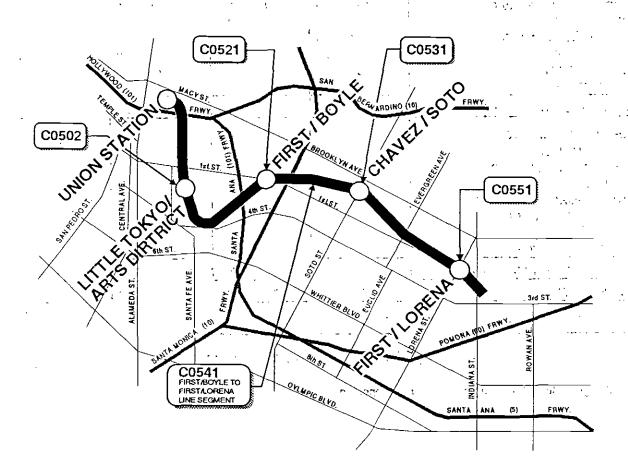
DATA SOURCE:

CCS: CCR REPORTS

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	METRO RED LINE SEGMENT 3
0	EAST SIDE EXTENSION
	EXECUTIVE SUMMARY
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## **Major Accomplishments**



## SYSTEMWIDE ACCOMPLISHMENTS

Completed the initial design tasks (AWA #411) for right-of-way and utilities. Civil began research of existing major structures for contracts C0502 and C0531. Began evaluating the Fluor Daniel proposed cost containment study. Prepared proposal for limited notice to proceed on continuing initial design tasks.

#### FINANCIAL STATUS

Budget/Forecast Variance (x \$1.000)

Buage	vrorecast va	riance (x \$1,0	<u>00)                                   </u>	
COST ELEMENT	CURRENT BUDGET	CURRENT FORECAST	<b>V</b> ARIANCE	MAY CHANGE IN FORECAST
CONSTRUCTION PROFESSIONAL SERVICES REAL ESTATE UTILITY/FORCE ACCOUNTS SPECIAL PROGRAMS CONTINGENCY PROJECT REVENUE	\$624,556.0 219,522.0 26,570.0 14,092.0 0.0 94,861.0	\$624,865.0 227,183.0 26,570.0 14,092.0 0.0 86,891.0	\$309.0 7,661.0 0.0 0.0 0.0 (7,970.0)	\$0.0 0.0 0.0 0.0 0.0 0.0
TOTAL PROJECT	\$979,601.0	\$979,601.0	<b>** \$0.0</b>	\$0.0
NEW REQUIREMENTS CONSTRUCTION PROFESSIONAL SERVICES				
REAL ESTATE  UTILITY/FORCE ACCOUNTS  SPECIAL PROGRAMS  CONTINGENCY  PROJECT REVENUE				
TOTAL NEW REQUIREMENTS	\$0.0	\$0.0	\$0.0	\$0.0
GRAND TOTAL	\$979,601.0	\$979,601.0	\$0.0	\$0.0

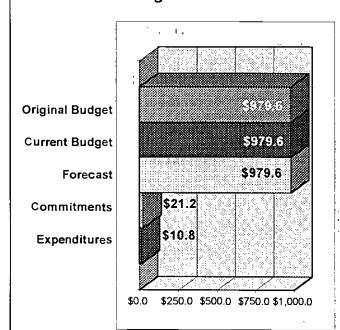
## Budget/Forecast Variance Analysis

No change in Budget and Forecast for current reporting period.

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#### FINANCIAL STATUS

### **Budget Status**



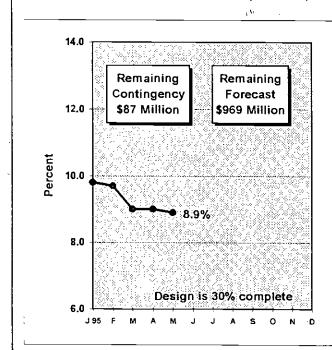
**Dollars in Millions** 

### **Budget Status Analysis**

No change in Budget for current reporting period.

### Remaining Contingency

as Percent of Remaining Forecast
(Remaining Forecast = Forecast - Expenditures)

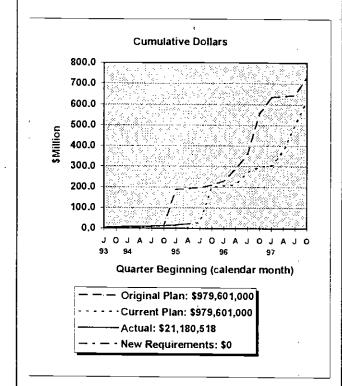


### Remaining Contingency Analysis

To date, 11 trends have been issued resulting in a reduction in contingency of \$7,970 million.

No change in contingency during the current reporting period.

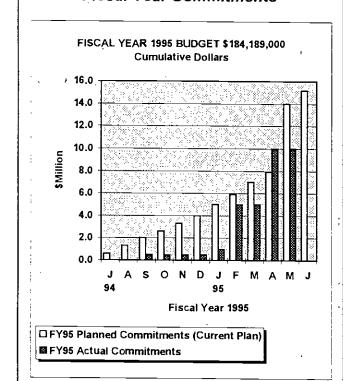
#### Project Commitments



# **Project Commitments Analysis**

No new project commitments for the current reporting period. Commitments delayed due to the delay in NTP for final design. Original plan is impacted because of delayed award for final design.

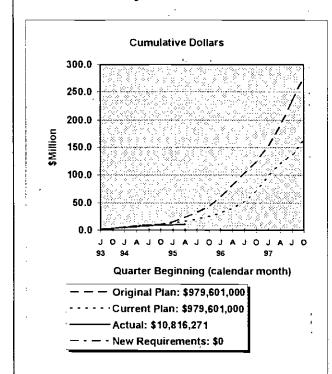
#### Fiscal Year Commitments



# Fiscal Year Commitments Analysis

Chart data is for FY95 only and is cumulative (not monthly).

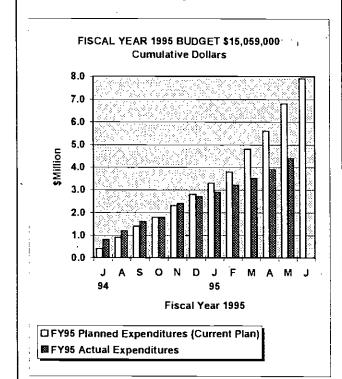
#### **Project Cashflow**



# **Project Cashflow Analysis**

Original plan is impacted because of delayed award for Final Design.

# Fiscal Year Project Cashflow

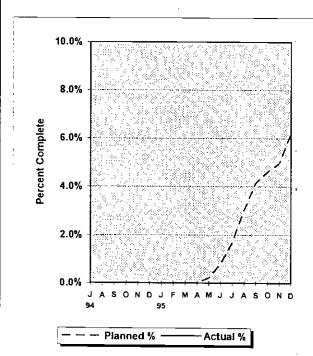


# Fiscal Year Cashflow Analysis

Chart data is for FY95 only and is cumulative (not monthly).

# SCHEDULE STATUS

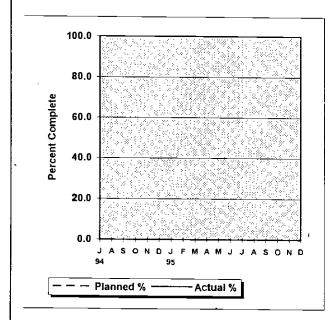




## Final Design Schedule Progress Analysis

Final Design began 5/15/95 with a "Limited Notice to Proceed." Full Notice to Proceed is expected 11/29/95.

# Schedule Status Construction Progress



Revenue Operations Date:

Planned 11/9/02 Forecast 9/22/03

# Construction Schedule Progress Analysis

Not applicable at this time.

#### **SCHEDULE STATUS**

#### Current Critical Path

- 1st/Boyle to 1st/Lorena Line Section
- Chavez/Soto Station

The Critical Path is currently 226 days behind schedule (negative float)

C0541 1st/Boyle - 1st/Lorena Line Section is on the critical path 11/29/95 through 8/18/99.

C0531 Chavez/Soto Station is on the critical path 8/19/99 through 11/10/00.

#### **Current Critical Path Analysis**

Design of both C0531 and C0541 is on the critical path starting at NTP for design 11/29/95. The critical path then becomes the C0541 bid, award, and tunneling process. When tunneling is complete, access to the Chavez/Soto station box is transferred from the C0541 contractor to the C0531 contractor, as is the critical path. When station concrete is substantially complete, trackwork access is provided and the critical path becomes trackwork installation.

With the continuing delays to start of final design, the ROD has thus far been pushed 226 days, and now stands at 9/22/03.

#### 3-Month Contract Schedule

**Contract Description** 

**Advertise Date** 

#### 3-Month Contract Schedule Analysis

No contracts for advertisement at this time.

Activity	Forecast	Forecast		995 1 1996 1997 1998	1999 20	2001 2	002 2003
Description	Start		П	995 1996 1997 1998	<u>tantiitaataasi</u>		
PRELIMINARY WORK  AA NOTICE TO PROCEED DESIGN	29NOV95			•	,		
C0531 CHAVEZ/SOTO STATION				<u> </u>	<u> </u>	<u> </u>	:
CS 531 CHAVEZ/SOTO EXCAVATION DESIGN	29NOV95	11DEC96	l		1	:	•
CS 531 ACCESS TO STATION BOX FROM 00541	19AUG99				<b>≜</b> •		
CS 531 F/R/P CONCRETE INVERT SLAB	19AUG99	10DEC99					
CS 531 F/R/P CONCRETE PLATFORM WALLS & COLUMNS	15OCT99	01FEB00	ı				
CS 531 F/R/P CONCRETE MEZZ FLOOR	09DEC99	27MAR00		•			-
CS 531 RESHORING	03FEB00	C5JUL00				•	
CS 531 F/R/P CONCRETE MEZZ LEVEL WALLS & COLUMNS	20APR00	22AUG00	l		<b>.</b>		
CS 531 F/R/P CONCRETE ROOF	30JUN00	11SEP00				<b>.</b>	·
CS 531 F/R/P CONCRETE PLATFORM	12SEP00	10NOV00					
C0541 LINE SECTION: 1st/BOYLE TO 1st/LORENA	1 - 1880 F	ostin .		<u> </u>			
SL 541 LINE SECTION DESIGN 1st/BOYLE-1st/LORENA	29NOV95	11DEC96		•			
SL 541 BID/AWARD	12DEC96	13JUN97		•		:	
SL 541 NTP CONSTRUCTION	16JUN97			•		-	
SL 541 PROCURE TBM #1 C/S-1/B	16JUN97	07MAY98		·			<b>:</b>
SL 541 ASSEMBLE TBM #1 C/S-1/B	08MAY98	18JUN98		ė.			
SL 541 ASSEMBLE TBM #2 C/S-1/B	19JUN98	30JUL98		. •			
SL 541 TBM #2 EXCAVATE C/S-1/B TUNNEL (CL)	31JUL98	04DEC98				-	(
SL 541 BREAK DOWN TBM #2/REASSEMBLE FOR C/S-1/L	07DEC98	04FEB99		,			•
SL 541 TBM #2 EXCAVATE C/S-1/L (CR)	05FEB99	17JUN99				,	
SL 541 REMOVE TBM #2/EXCAVATE X-PASSAGES (CL/CR)	18JUN99						
SE 541 TURN OVER STATION BOX TO CHAVE 2/SOTO		18AUG99		· · ·	<u> </u>	<u></u>	<u></u>
+ C2610 TRACKWORK INSTALLATION		, •		,	<u> </u>		
	13NOV00				<u></u>		: <del></del>
+ B620 AUTOMATIC TRAIN CONTROL (ATC)	19OCT01					•	
					<u> </u>		
B645 TRANSIT AUTOMATIC CONTROLS & SCADA	17APR02	_		•			
H1648 COMMUNICATION INSTALLATION					<del></del>		
CO 1648 INSTALLATION & TESTING	14FEB02	16MAY02		,	ļ.	•	
CO 1648 FINAL TESTING	17MAY02	17OCT02			: :		<b></b>
TS999 TESTING & PRE-REVENUE OPERATIONS					1	<del></del>	<b>V</b>
INTEGRATED TESTING	18OCT02	21APR03		•			•
PRE-REVENUE OPERATIONS	22APR03	22SEP03					
R.O.D. (EAST LA)		22SEP03		·	<u> </u>		<u> </u>
Project Start TSALES				MTA - SEGMENT 3	•	Enemal 1 of 1 ENGINEERING MAJ	AGEMENT CONSULTANT Checked Approve
Project Floids 2282P91 Date Date 278AY90 Progress Bar				EAST SIDE EXTENSION TO 1st/LORENA			
Plot Date 66.AR.96				CRITICAL PATH	-	-	
(a) Primovers Systems, Inc.						<u></u>	

#### AREAS OF CONCERN

#### East Side Extension General Engineering Services

#### Schedule Impacts

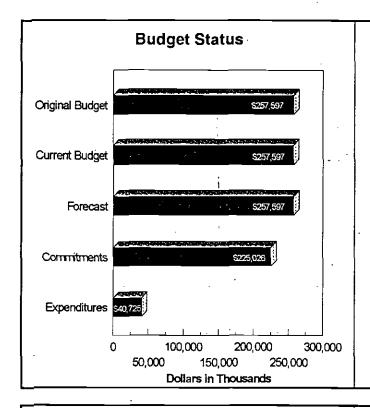
#### Item Concern/Impact Status/Action The Record of Decision Schedule impacts include MTA and EMC to resolve was approved with a re-opening negotiations all slippages within the Revenue Operations Date for Final Design Services, Project Schedule. To date of November 2002. This new selection of Section 110 working days of the date was based upon a Designers and additional 226 negative working delay to start scheduled start date for Final days of float have been Final Design services in Design Services. mitigated from Two the January 1995. On April hundred schedule. The conclusion twenty-six 25, 1995, MTA Board working days of negative of the Fluor Daniel study approved EMC to start float have resulted. The will determine the actual limited design services for outcome of the Fluor start of Final Design. geotechnical, advanced Daniel cost containment utilities, right-of-way and study could further result to negotiate a fixed price in additional delays to the contract for final design Project Schedule. Plus, services with a Notice-tothere is an eventuality of a Proceed amount of \$5 protest to the Section million. Authorization Designer selection which was given to EMC on May could further delay the 15, 1995 to begin with start of Final Design. the aforementioned scope and to include the review cost reduction recommendation study as prepared by Fluor Daniel Engineering for \$2.6 million.

# VEHICLE ACQUISITION PROJECT EXECUTIVE SUMMARY

	COST ELEMENT	CURRENT BUDGET (\$000)	CURRENT FORECAST (\$000)	VARIANCE (\$000)	MAY CHANGE IN FORECAST (\$000)
•	CONSTRUCTION	\$232,370	\$229,830	(\$2,539)	· \$0
	PROFESSIONAL SERVICES	12,960	19,505	6,544	0
	PROJECT CONTINGENCY	12,267	8,262	(4,004)	0
	PROJECT REVENUE	0	0	0	0
-	TOTAL PROJECT	<b>\$</b> 257,597	<b>\$</b> 257,597	<b>\$</b> 0	\$0

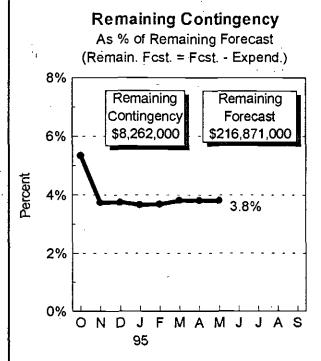
# Budget/Forecast Variance Analysis

There was no reconciliation for the month of May 1995 because there were no trends. The 6.5 million variance in Professional Services is mainly due to the incorporation of a Project Budget Change Request (PBCR) for the E0350 contract, LTK Engineering Services. This PBCR is in the process of being finalized.



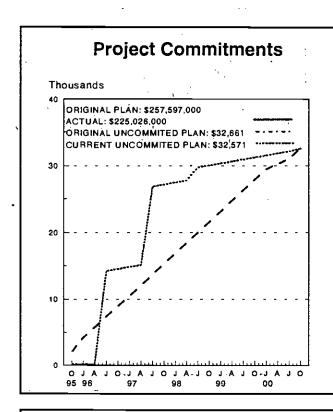
# **Budget Status Analysis**

The Current Project Budget is \$258 million with a current forecast of \$258 million. The Forecast includes all trends (#001 - #013).



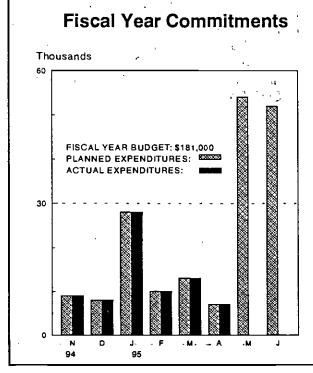
# **Remaining Contingency Analysis**

The remaining Project Contingency for the Los Angeles Light Rail Vehicle has remained at 3.8% from March 1995 through May 1995. Currently, Project Contingency stands at \$8.26 million.



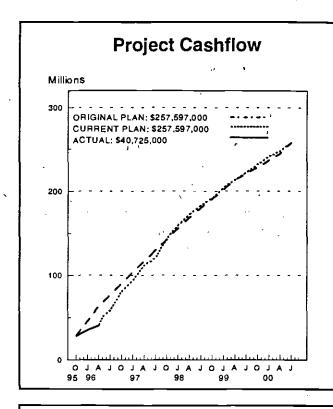
# **Project Commitments Analysis**

Project planned commitments are \$257.6 million; actual commitments are \$225.0 million or 87.3% of the total forecast. The total increase for May commitments for the period are \$7,000. The Project Management Oversight contract, FM014, increased commitments \$7,000 to bring commitments into balance with expenditures. The chart is based on uncommitted amounts. Actual commitments are through March 1995.



# **Fiscal Year Commitment Analysis**

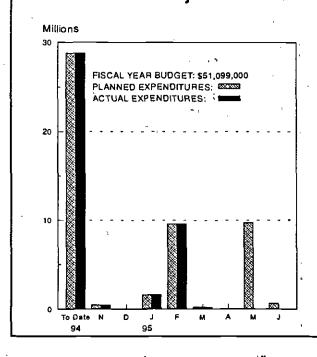
Planned commitments are \$181 thousand; actual commitments are \$75 thousand. The reason for the variance is due to contingencies in the forecast. The chart is based on uncommitted amounts. Actual commitments are through March 1995.



# **Project Cashflow Analysis**

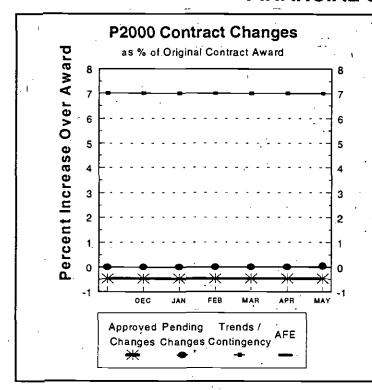
Project planned cumulative expenditures are \$257.6 million; actual expenditures to date are \$40.7 million or 15.8% of the total forecast. These expenditures are accounted for mainly by Contract P2000, General Engineering, Specialty Services and Project Administration.

# **Fiscal Year Project Cashflow**



# Fiscal Year Cashflow Analysis

Planned fiscal year cumulative expenditures for the month are \$50.4 million; actual expenditures are \$40.7 million. The underrunning is associated with the delays in SDC Program Schedule.



# **Contract Changes Analysis**

The figures for May 1995 are as follows:

Approved Changes.....(0.5%)

Pending Changes......0.04%

Trends/Contingency.....7.0%

AFE.....0.5%

#### P2000 Contract

# **Contract Cost and Forecast**

Comparison to Budget

_ <del>_</del>			
Dollars in Thousands	Current	Previous	Variance
Original Contract Award	\$215,370	\$215,370	\$0
Approved Contract Value*	(\$1,000)	(\$1,000)	<b>so</b>
Current Value	\$214,370	\$214,370	\$0
Pending Logged Changes	\$71.7	. \$71.7	<b>, \$0</b>
Trends and Contingency	\$14,989	\$14,989	\$0
Total Forecast	\$229,830	\$229, <b>8</b> 30	\$0
Constr. Budget	\$232,370	\$232,370	\$0

\*Includes by Executed Change Orders and Approved Not-to-Exceed Costs. forecast and Budget for Awarded contracts only.

# P2000 Contract Contract Forecast Analysis

The approved change value decrease is primarily due to a testing location change and the addition of three (3) options.

The pending logged changes increase is due to changes as a result of the Specification Review Conference.

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SRC AF 16MAY94	SPECIFICATION REVIEW CONFERENCE
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AEG PROPULSION	
APC015 AF I8NOV94 **	AEG CDR-PROPULSION SYSTEM
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APM036 EF 29SEP95	COMPLETE TRACTION MOTOR TESTING
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APDESIGNC	♦ COMPLETE INTEGRATED SYSTEMS CONFORMANCE TEST
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(c) Primevera Bystems, Inc.	

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# **AREAS OF CONCERN**

#### NEW

#### item

Vehicle Weight

#### Concern/Impact

Project weights for both the Standard and Prototype Cars have increased about 1.5% this month. This represents an increase (calculated) of over 2000 pounds per car. In fact, this increase puts the Prototype Car several hundred pounds over its allowed limit. It is disconcerting to predeict this weight level so early in the program, prior to construction and compression testing of the first car, where pounds are generally added to the design.

#### Status/Action

SDC has a demonstrated awareness of this problem. They have, in several recent design reviews, raised concems about vehicle weight, and tendered proposals to reduce same. A number of these proposals, however, such as a balsa core floor and aluminum hub wheels, would increase maintenance requirements and reduce reliability. Alternative solutions, with no impact to maintainability or reliability, must be pursued. The solution to this problem will be long term in nature, and will be addressed on a regular basis under Areas of Concern.

#### **ONGOING**

#### item

Axle Design

#### Concern/Impact

SDC has submitted an axle design drawing consistent with the axle stress analysis; however, there are a number of other inconsistencies that must be resolved before the design *per se* can be approved. From the information we have received thus far, it appears that due to the enhanced strength of the steel proposed, we will be able to use the lighter, smaller axle proposed by Duewag. This will be carried as an Area of Concern until final resolution.

#### Status/Action

No change from last month.

# **AREAS OF CONCERN (CON'T)**

#### ltem

Vehicle Structure and Truck Design

#### Concern/Impact

The progress of Duewag's structure and truck design to date.

#### Status/Action

No Change from last month.

#### ltem

EMI (Electromagnetic Interference) Limits

#### Concern/Impact

We were informally notified this month that the MTA's Pasadena signal design group has some misgivings with regard to the proposed (conducted) EMI schedule of acceptable interference currents as a function of frequency, in that the schedule is undefined for values under 40 Hertz. The original rationale for the lack of definition under 40 Hertz is that it was thought there was no signal vulnerability in this domain. Additionally, rail return currents will increase from the present 10 amps at 40 Hertz to the specification allowable 1400 amps at zero Hertz.

#### Status/Action

We have asked SDC (AEG) to provide a definition for values under 40 Hertz, which definition will be given to the Pasadena signal designers for their review.

#### ltem

R134A Refrigerant Fluid

#### Concern/Impact

The issue of pursuing R134a as a refrigerant fluid for the P2000 Cars was discussed with Operations. In that Sutrak has not been able to propose a viable R134a refrigerant based system, and in that Operations reported that the Sutrak bus equipment is not considered reliable, it was decided not to pursue a new system design with R134a with Sutrak.

#### Status/Action

This item will be dropped as an Area of Concern.

# **AREAS OF CONCERN (CON'T)**

#### ltem

Schedule Slippage

#### Concern/Impact

Last month we reported that the SDC vehicle schedule indicated that delivery of the first 15 cars varied from -16 to -22 days float. The most recent schedule submitted (Data Date: 05JUN95) indicates that the schedule float associated with the delivery of the first 15 cars now varies from +7 days (Car No. 15) to -59 days (Prototype Cars). SDC maintains that they have a recovery schedule planned which will result in on-time delivery of the vehicles. Details of this recovery plan will not be available, however, until the situation at CCI stabilizes and they are able to accurately forecast the shipment of the first carshell to SDC/Sacramento.

#### Status/Action

Vendor schedule performance is slipping in some areas and improving in others. In order to develop a feel for the drift in subsystem schedule delivery, we offer the following chart, which should be self-explanatory. Areas of concern are indicated in boldface and italics. We will update this chart with each new schedule submittal.

<u>Key Subsystem</u>	<u>01MA</u>	<u>Y95 Float (</u>	05JUN95 Floa	<u>t</u>
Propulsion Control Units (AEG)	00	days .	+02	days
Traction Motors (AEG)	37	days	+41	days
Gearboxes (AEG)	+33	days	+33	days
Carshell No. 1 (CCI)	<b>- 2</b> 5	days	- 43	days
Carseats (Coach & Car)	+57	days	+57	days
Trucks (Duewag)	- 30	days	- 05	days
Side Doors (IFE Kiekert)	+03	days	- 102 0	days
Lighting/Signs (Luminator)	- 18	days	- 26	days
Wheels & Axles (Penn Machine)	+12	days	- 13	days
HVAC Units (Sutrak)	+49	days	+43	days
Auxiliary Power Supply(Transrail)	- 01	days	+23	days
Pantograph (Transtech)	+103	days	+103	days
Communications Eqmt. (VH)	+30	days	+30	days
Coupler/Brake Eqmt. (WABCO)	No Ir	formation	+18	days

#### Item

R22 HVAC Design

#### Concern/Impact

To date, there have been no deliverables from SDC with regard to the HVAC design.

#### Status/Action

This problem is considered *very* serious, and SDC has been advised to either produce the required deliverables or consider a new supplier.

# **AREAS OF CONCERN (CON'T)**

#### Item

SDC Quality Assurance Program

#### Concern/Impact

Insofar as the CCI Quality Program is concerned, substantial progress has been made. CCI has hired one full time and one part time inspector. CCI's lead Quality Representative has been conducting source inspections and FAI's at supplier's facilities and has been doing an exemplary job. CCI has also achieved substantial progress in the drafting of their Quality Manual.

There is not much progress on the SDC side, however. We are still working to bring SDC's QA Program in line with the findings of our Audit Team, sent to Sacramento earlier in the year. Problems still under discussion include the QA Manager's accessibility to the CEO; the QA Division's organizational structure; the number of QA personnel assigned to the assembly facility; the lack of requisite QA documentation from both SDC and its supplier base; the lack of SDC QA supervision over Supplier design efforts, including the lack of SDC QA representation at Engineering Design Review; and SDC's continued refusal to supply source inspection at select suppliers..

#### Status/Action

With regard to this last item, on 30MAY95 we wrote to SDC *directing* them to provide the *specification* required levels of source inspection. We no longer consider this a candidate item for discussion

#### Item

**Descision on Driverless Technology** 

#### Concern/Impact

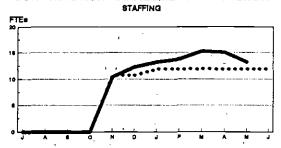
If Driverless Technology is to be selected for the first 34 Green Line-designated cars, it must be fully approved by 25AUG95. As noted in the Executive Summary to this report, however, even if Driverless Technology is not selected, it may be to the MTA's advantage to consider the inclusion of a Vehicle Health Monitor on each vehicle.

#### Status/Action

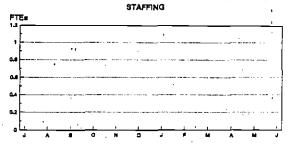
Updates on this possibility will be provided in future reports.

# LIGHT RAIL VEHICLE PROCUREMENT STAFFING PLAN VS. ACTUALS

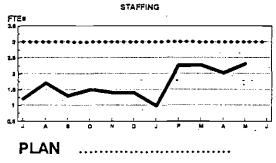
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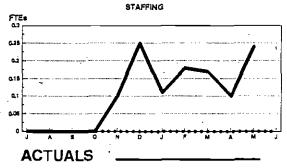
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OTHER METRO CONSTRUCTION

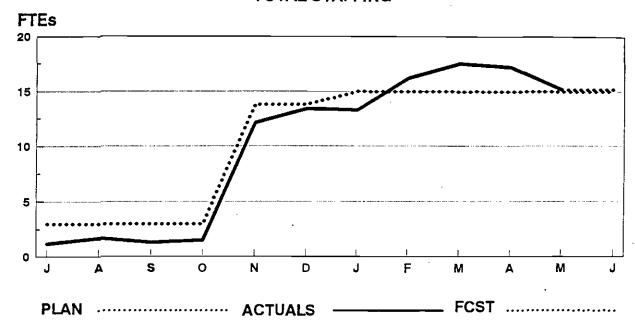


# **STAFFING ANALYSIS**

No significant variance.

# LIGHT RAIL VEHICLE PROCUREMENT

**TOTAL STAFFING** 



# **STAFFING ANALYSIS**

No significant variance.

Note: Total Staffing Chart includes EMC, CM and MTA Staffing only.