

RAIL PROGRAM STATUS SUMMARY

**THE LOS ANGELES COUNTY
METROPOLITAN TRANSPORTATION AUTHORITY
METRO CONSTRUCTION DIVISION**

MAY 1996



RAIL PROGRAM SUMMARY

METRO PASADENA BLUE LINE

Cost Status
 Current Budget \$803,868,000

- The Current Budget incorporates work scope approved by the MTA Board in February.

Schedule Status
 Current Plan May 2001

	Design Progress	Construction Progress
	Plan 99.1%	9.7%
	Actual 80.3%	7.1%

- The project was rebaselined to incorporate Value Engineering/Cost Containment items.

Safety Status

	Project Rate	National Average
Lost Time Rate	0.0	4.9
Lost Work Days	0.0	148.1

- The project is producing 15,000 construction hours per month with no Lost Time Injuries.

Areas of Concern

- Supplemental Environmental Impact Statement (SEIR) - if required will have potential cost and schedule impacts.

Monthly Highlights

- The MTA continued working with the EMC to develop a detailed Project Implementation Plan (PIP) for CWO 037 for \$3 million for the resumption of design work.
- The MTA continued preparation of a draft report for submittal to the MTA Board in June 1996 which assesses project cost and schedule based on current scope and design status.

METRO RED LINE SEGMENT 2

Cost Status
 Current Budget \$1,640,781,000

- There were no changes to the Current Budget during the period.

Schedule Status

	Design Progress	Construction Progress
Wilshire Corridor	Plan 82.8%	81.5%
Current Plan July 1996	Actual 82.5%	74.1%

- Wilshire Corridor is currently ahead of schedule.

Vermont/Hollywood - Current Plan Dec 1998

- Vermont/Hollywood Corridor is behind schedule due to tunnel delays under Hollywood Blvd.

Safety Status

	Project Rate	National Average
Lost Time Rate	2.7	4.9
Lost Work Days	73.8	148.1

- Nineteen contracts were completed with no Lost Time Injuries.

Areas of Concern

- Vermont/Sunset Station Kaiser Entrance Construction - The CM is evaluating various scenarios to mitigate potential delays for trackwork access and other station milestones.

Monthly Highlights

- MTA began pre-revenue operations of the Wilshire segment on May 19, 1996.
- MTA Marketing is finalizing plans for the Wilshire Corridor Grand Opening on July 13, 1996.
- Continued system integration testing at all stations along the Wilshire Corridor.

METRO RED LINE SEGMENT 3 NORTH HOLLYWOOD EXTENSION

Cost Status			
Current Budget	\$1,313,848,000		
<ul style="list-style-type: none"> The Current Budget remained unchanged. 			
Schedule Status		Design Progress	Construction Progress
Current Plan	September 2000	Plan 96.8%	45.4%
		Actual 90.2%	23.9%
<ul style="list-style-type: none"> The project is behind schedule due to C0331 grouting delays. 			
Safety Status		Project Rate	National Average
Lost Time Rate		0.2	4.9
Lost Work Days		16.2	148.1
<ul style="list-style-type: none"> The project completed 130,000 labor hours with no Lost Time Injuries. 			
Areas of Concern			
<ul style="list-style-type: none"> Underground Easements - The acquisition of outstanding real estate parcels for C0331 North Hollywood Tunnel may impact mining operations. 			
Monthly Highlights			
<ul style="list-style-type: none"> A study of the MTA Board's Motion to restrict C0311 Tunnel Blasting and Groundwater has been completed and is under review. MTA, JMA, and EMC are working to refine the program for Universal City Roadways and Site Restoration packages. Design work is scheduled to begin in September. 			

METRO RED LINE SEGMENT 3 MID-CITY EXTENSION

Cost Status			
Current Budget	\$490,663,000		
<ul style="list-style-type: none"> The Current Budget value is contingent on the preferred alternative selected. 			
Schedule Status		Design Progress	Construction Progress
Current Plan	TBD	Plan 0%	0%
		Actual 0%	0%
Safety Status		Project Rate	National Average
Lost Time Rate		N/A	4.9
Lost Work Days		N/A	148.1
<ul style="list-style-type: none"> No Construction Safety activity for this period. 			
Areas of Concern			
<ul style="list-style-type: none"> Procurement Contracts - A plan to defer Mid-City obligations for Hazardous Material Handling, Owner's Insurance, etc; will be submitted to the MTA Board for approval in June 1996. 			
Monthly Highlights			
<ul style="list-style-type: none"> Enviro-Rail was authorized to proceed with six additional probes and three wells to supplement existing subsurface data for the new alignment. The engineering feasibility study for the Wilton/Arlington alignment began May 3, 1996 and is scheduled for completion in August. MTA and EMC began compiling a list of issues for review by the Tunnel Review Board scheduled for June 17-18. 			

METRO RED SEGMENT 3 EAST SIDE EXTENSION

Cost Status		
Current Budget	\$979,601,000	
<ul style="list-style-type: none"> The Current Budget remained unchanged. 		
Schedule Status		
Current Plan	November 2002	
	Plan	21.4%
	Actual	19.7%
<ul style="list-style-type: none"> Design Progress is behind the Current Plan due to authorized scope changes. 		
Safety Status		
Lost Time Rate	N/A	4.9
Lost Work Days	N/A	148.1
<ul style="list-style-type: none"> No Construction Safety activity for this period. 		
Areas of Concern		
<ul style="list-style-type: none"> Contract C0551 additional property acquisitions - MTA Real Estate is developing a property acquisition schedule to mitigate potential delays. 		
Monthly Highlights		
<ul style="list-style-type: none"> MTA is reviewing design and project schedules. Formal results are forecasted for June. MTA received a revised scope of work in the Project Implementation Plan on May 3, 1996. Cost mitigation measures are under review for the Power Distribution System, Floating Slab Reduction, and Under Platform Exhaust Fans. 		

VEHICLE ACQUISITION PROJECT

Cost Status		
Current Budget	\$257,597,000	
<ul style="list-style-type: none"> The Current Budget remained unchanged. 		
Schedule Status		
	Design Progress	Fabrication Progress
Schedule Car Delivery		
1st Car	June 1997	90%
52nd Car	Oct 1998	25%
<ul style="list-style-type: none"> The schedule from the contractor reflects eight months delay in first car deliveries due to design and manufacturing problems. 		
Areas of Concern		
<ul style="list-style-type: none"> Failure of Power Truck Friction Support Brackets - Testing on the new bracket structures is scheduled to begin in June. 		
Monthly Highlights		
<ul style="list-style-type: none"> An audit of the Termination Cost Claim by Siemens was conducted. First Article Inspections of the Auxiliary Power Supply/Low Voltage Power Supply and Battery Charger were completed. 		

METROPOLITAN TRANSPORTATION AUTHORITY
PROJECT COST REPORT - TOTAL RAIL PROGRAM
SUMMARY BY COST ELEMENT
(IN THOUSANDS)

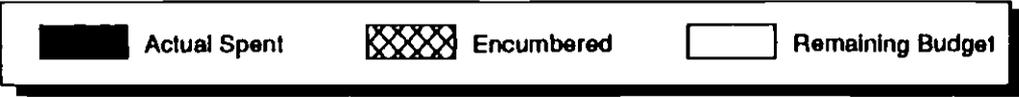
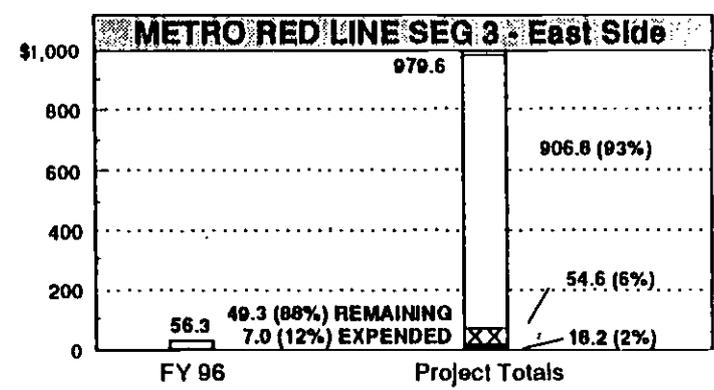
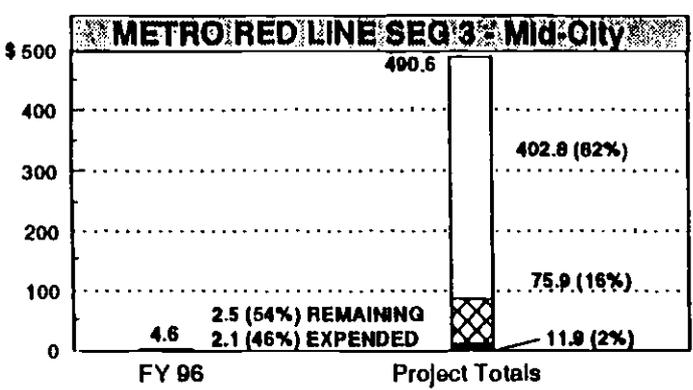
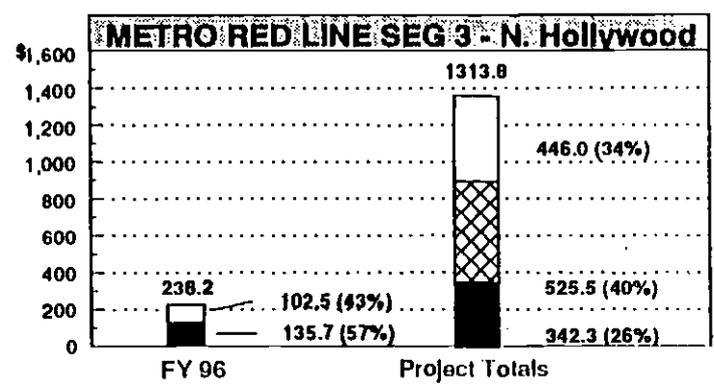
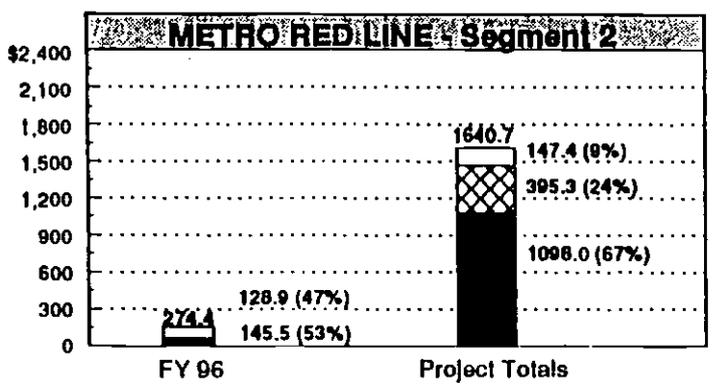
STATUS DATE: 5/31/96

PROJECT: TOTAL RAIL PROGRAM

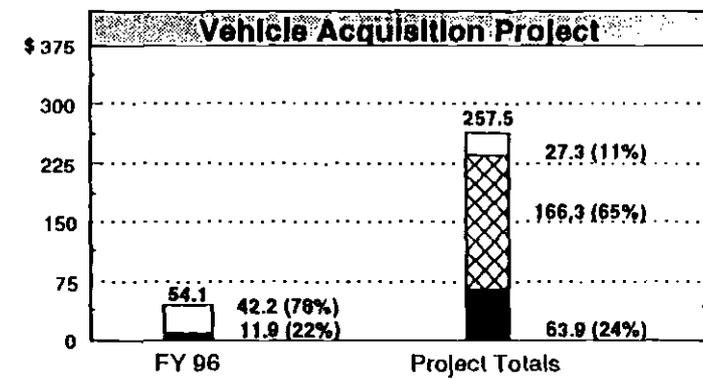
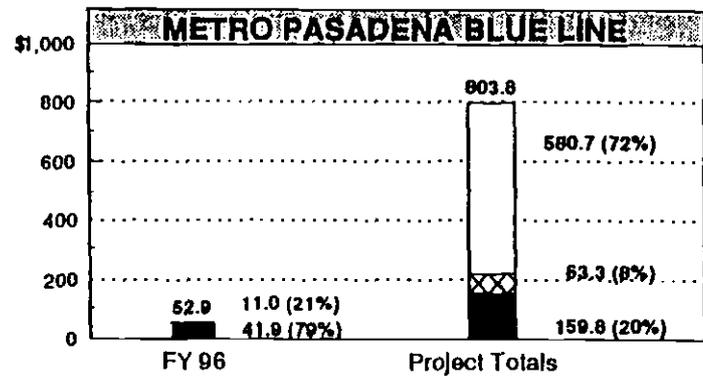
ELEMENT DESCRIPTION	BUDGET		COMMITMENTS		INCURRED COST		EXPENDITURES		CURRENT FORECAST (9)	VARIANCE (9-2) (10)
	ORIGINAL (1)	CURRENT (2)	PERIOD (3)	TO DATE (4)	PERIOD (5)	TO DATE (6)	PERIOD (7)	TO DATE (8)		
T CONSTRUCTION	5,153,507	5,333,704	17,882	3,670,355	0	0	75	2,618,157	4,957,300	(42,264)
S PROFESSIONAL SERVICES	1,685,529	2,094,410	8,568	1,543,533	0	0	1,195	1,355,428	2,046,329	50,049
R REAL ESTATE	480,002	546,348	0	398,201	0	0	0	397,374	495,206	2,160
F UTILITY/AGENCY FORCE ACCOUNTS	146,279	159,681	10	128,875	0	0	0	105,365	155,632	1,040
D SPECIAL PROGRAMS	11,045	16,911	0	5,751	0	0	0	4,690	15,864	(1,046)
C CONTINGENCY	560,120	350,263	0	0	0	0	0	0	287,630	(62,630)
A PROJECT REVENUE	(18,115)	(38,123)	0	(2,822)	0	0	0	(11,284)	(33,201)	4,923
PROJECT GRAND TOTAL	8,018,367	8,463,194	26,460	5,743,893	0	0	1,270	4,469,730	7,924,760	(47,768)

NEW REQUIREMENTS DESCRIPTION	BUDGET		COMMITMENTS		INCURRED COST		EXPENDITURES		CURRENT FORECAST (9)	VARIANCE (9-2) (10)
	ORIGINAL (1)	CURRENT (2)	PERIOD (3)	TO DATE (4)	PERIOD (5)	TO DATE (6)	PERIOD (7)	TO DATE (8)		
T CONSTRUCTION	0	49,393	3,896	47,654	0	0	0	21,247	60,390	10,997
S PROFESSIONAL SERVICES	0	17,080	(326)	18,794	0	0	(24)	9,435	17,250	170
R REAL ESTATE	0	0	0	0	0	0	0	37	0	0
F UTILITY/AGENCY FORCE ACCOUNTS	0	0	0	0	0	0	0	0	0	0
D SPECIAL PROGRAMS	0	20	0	20	0	0	0	20	20	0
C CONTINGENCY	0	1,763	0	0	0	0	0	0	745	(1,017)
A PROJECT REVENUE	0	0	0	0	0	0	0	0	(11,517)	(11,517)
NEW REQ. SUBTOTAL	0	68,256	3,570	64,468	0	0	(24)	30,739	66,888	(1,367)
PROJECT GRAND TOTAL	8,018,367	8,531,450	30,030	5,808,361	0	0	1,246	4,500,469	7,991,648	(49,135)

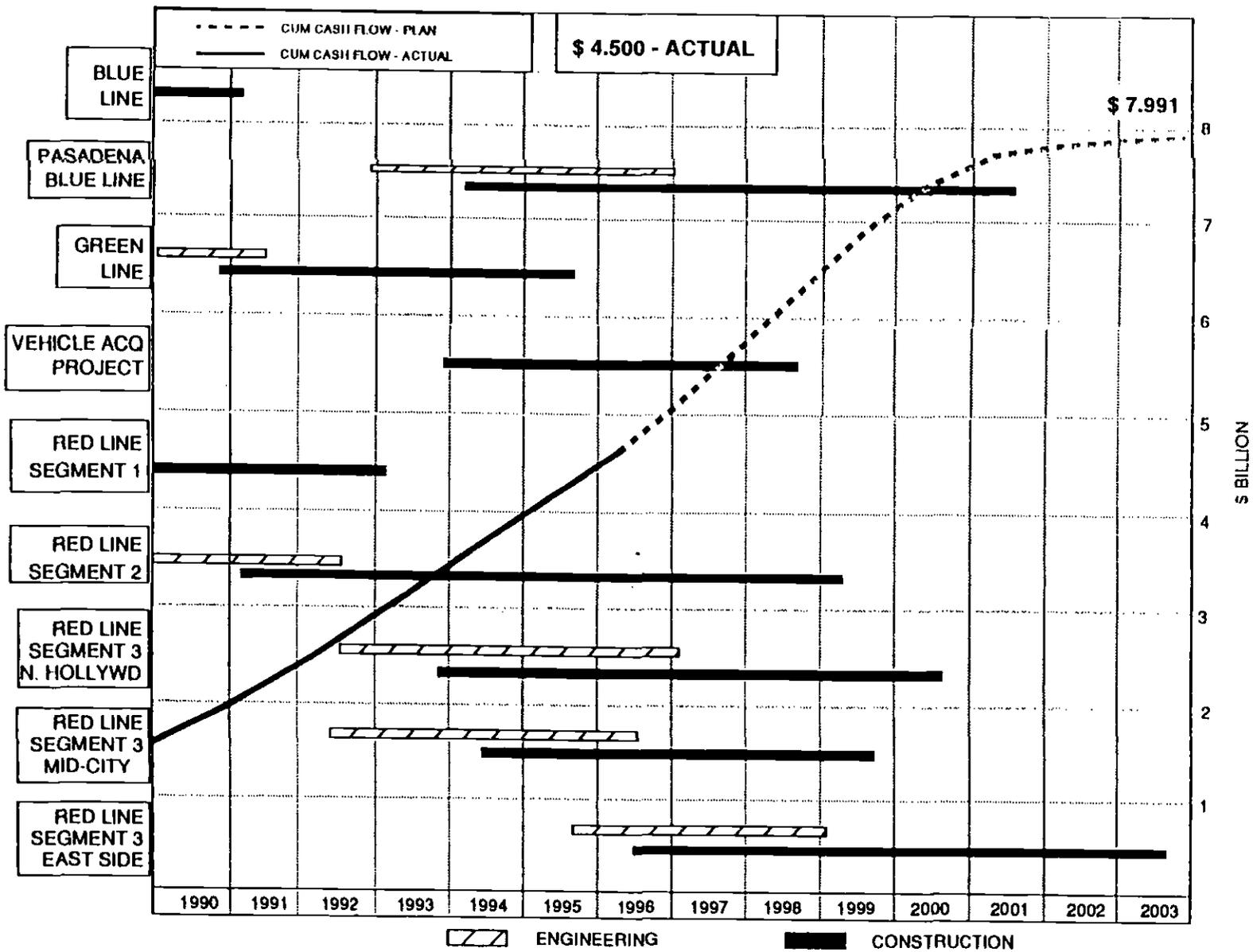
BUDGET STATUS - May 31, 1996
(in \$ Millions)



BUDGET STATUS - May 31, 1996
(in \$ Millions)



Actual Spent
 Encumbered
 Remaining Budget

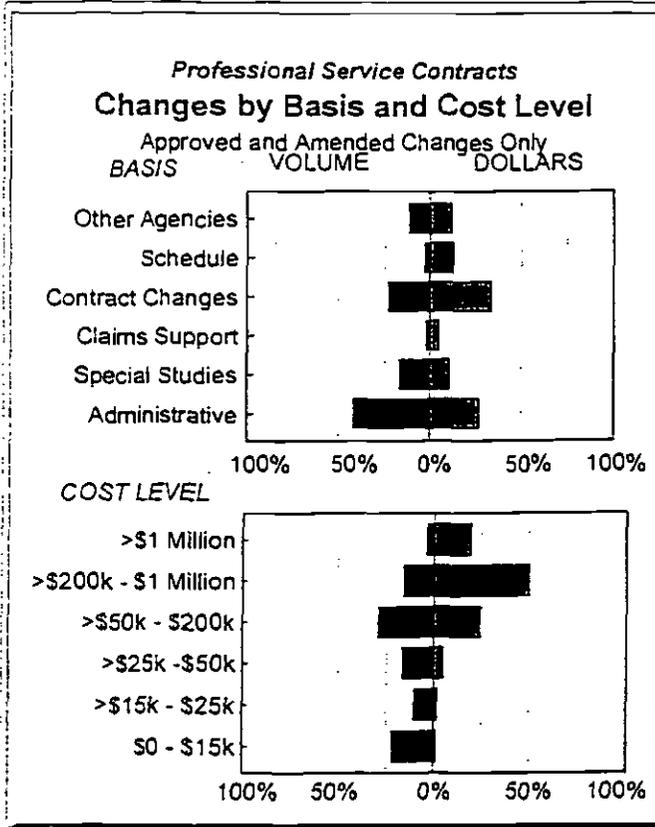


METROPOLITAN TRANSPORTATION AUTHORITY
FUNDING SOURCES (IN MILLIONS)

MAY 1996

	METRO BLUE LINE*		PASADENA BLUE LINE		METRO GREEN LINE		METRO RED SEGMENT 1**		METRO RED SEGMENT 2		METRO RED LINE SEG 3 - NN		METRO RED LINE SEG 3 - MC		METRO RED LINE SEG 3 - ES		VEHICLE ACQUISITION PROJECT		TOTAL PROGRAM			
	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%		
ORIGINAL SCOPE:																						
FTA-SECTION 3							605.3	42	667.0	40	681.0	52	242.5	49	492.9	50					2688.7	32
FTA - OTHER																	11.9	4			11.9	0
ISTEA - FED SURFACE TRANSIT PROG									52.1	3	50.0	4			25.0	2	84.0	32			211.1	3
FED-ISTEA RSTP/CMAQ											39.9	3	40.4	8	86.1	9	6.1	3			172.5	2
FTA-SECTION 9							90.6	6													90.6	1
STATE			387.8	48	108.4	15	210.3	15	133.0	8	85.0	5	40.0	8	85.0	7	33.5	13			1041.0	12
STATE TSM MATCH											3.2	0	7.2	2	11.1	1					21.5	0
SB 1995 TRUST FUND											75.0	6									75.0	1
PROPOSITION A	877.2	100	202.6	25	205.1	28	179.5	12	501.9	31											1966.3	23
PROPOSITION C			213.5	27	400.3	56					192.8	15	151.6	32	299.1	31	122.0	48			1379.3	16
PROP C (AMERICAN DISABILITY ACT)					6.0	1															6.0	0
CITY OF LOS ANGELES							34.0	2	157.5	10	190.7	14	9.0	1	0.3	0					391.5	5
BENEFIT ASSESSMENT							130.3	9	58.0	4	13.5	1									201.8	2
COST OVERRUN ACCOUNT							200.1	14													200.1	2
TOTAL	877.2	100	803.9	100	717.8	100	1450.1	100	1569.5	96	1311.1	100	490.7	100	979.5	100	257.5	100			8457.3	99
OTHER LOCALLY FUNDED ACTIVITIES:																						
PROP C (TRANSIT ENHANCEMENTS)									68.7	4	2.7	0									71.4	1
FED ISTEA RSTP/CMAQ									2.5	0											2.5	0
TOTAL									71.2	4	2.7	0									73.9	1

Note: Data reflects Current Budget



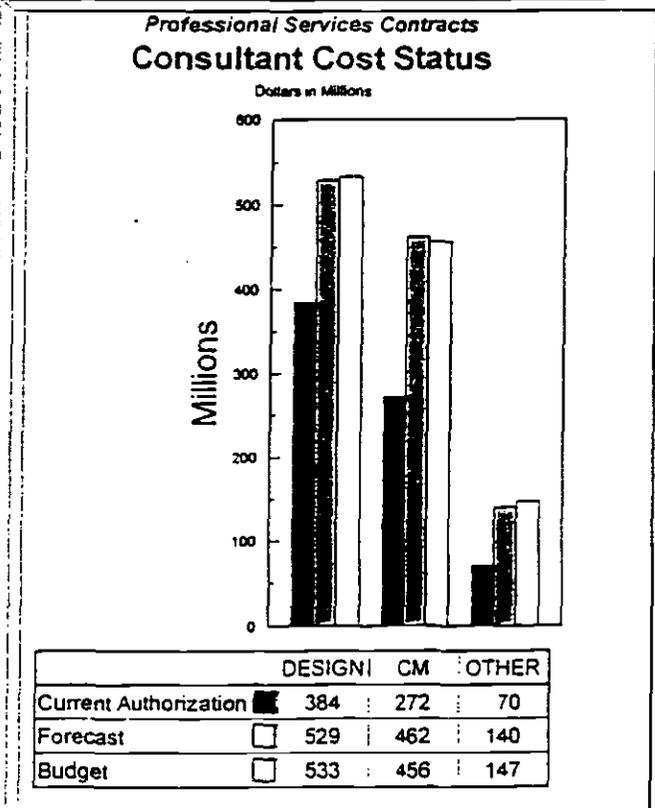
CHANGE BASIS ANALYSIS

Administrative changes account for approximately 42% or 309 of the 733 Consultant Change Notices overall. This equals 27% of the overall change cost of approved and amended changes.

CHANGE COST LEVEL ANALYSIS

As shown on the Cost Level Analysis chart opposite, the MTA Board approves 68.9% of all change costs associated with the Rail Project or \$66M of a total change cost of \$96M. This equal 20% of the total change volume or 148 of 733 total changes.

Note: Basis and Cost charts include staff approved and MTA Board amended changes.



PROFESSIONAL SERVICES COST ANALYSIS

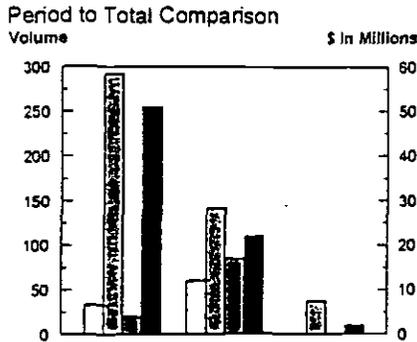
Report revised to show authorized, budgeted, and forecast consultant costs rather than changes, amendments, and planned scope additions.

Now includes all professional service contracts. Groups represent contract types not individual contracts (i.e. "design" includes all line item 11 contracts not just EMC.)

The forecast for construction management professional services continues to exceed the budget amount.

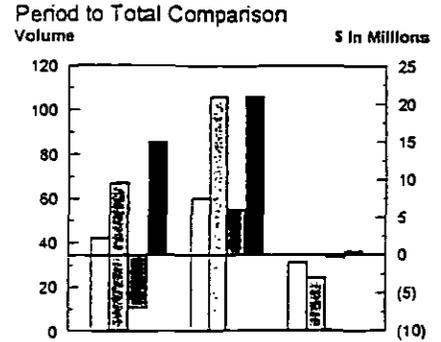
CHNGSAMPROS96

Professional Service Contracts
Amendment History



	EMC	CM	OTHER
# This Period <input type="checkbox"/>	33	60	0
# Previous <input checked="" type="checkbox"/>	292	141	37
\$ This Period <input checked="" type="checkbox"/>	4	17	0
\$ Previous <input checked="" type="checkbox"/>	51	22	2

All - Professional Service Contracts
Pending Consultant Changes



	EMC	CM	OTHER
# This Period <input type="checkbox"/>	42	60	31
# Previous <input checked="" type="checkbox"/>	67	106	24
\$ This Period <input checked="" type="checkbox"/>	-7	6	-0
\$ Previous <input checked="" type="checkbox"/>	15	21	1

CONSULTANT CHANGE NOTICE ANALYSIS

Twelve new Requests for Change (RFC) were received during the period with a total estimated value of \$1.1million.

Twenty-three new Consultant Change Notices (CCN's) were assigned during the period with an estimated negative value of \$15.5 million. The negative value results from CCN's being processed to deobligate funds from Metro Red Line Mid-City Extension contracts during the recently initiated supplemental alignment study.

No CCN's were rejected / cancelled during the period.

Ninety-three CCN's were approved by the Board during the period with a negotiated value of \$21 million.

Cost Performance Relative to Corporate Goals
(\$ IN THOUSANDS)

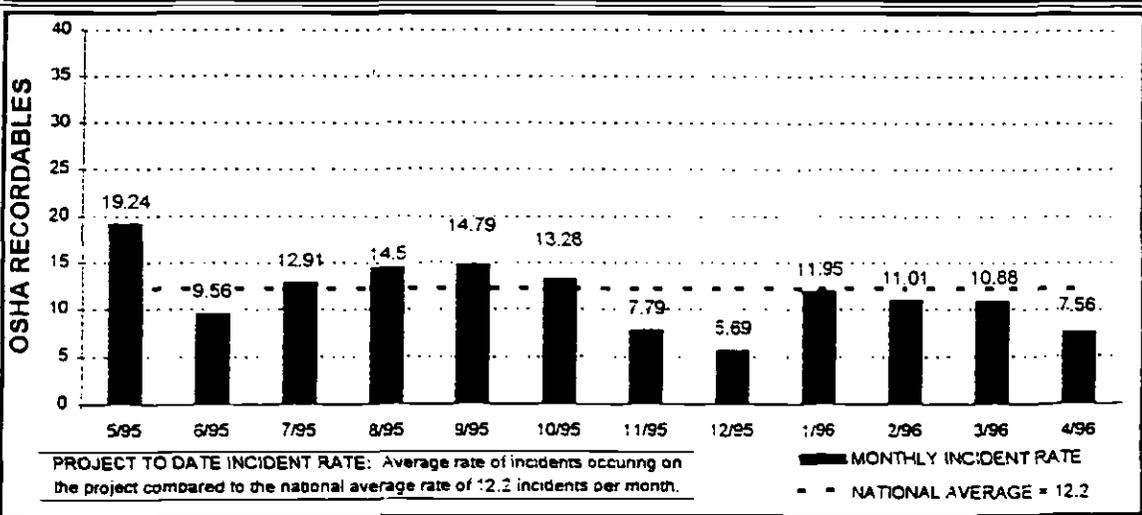
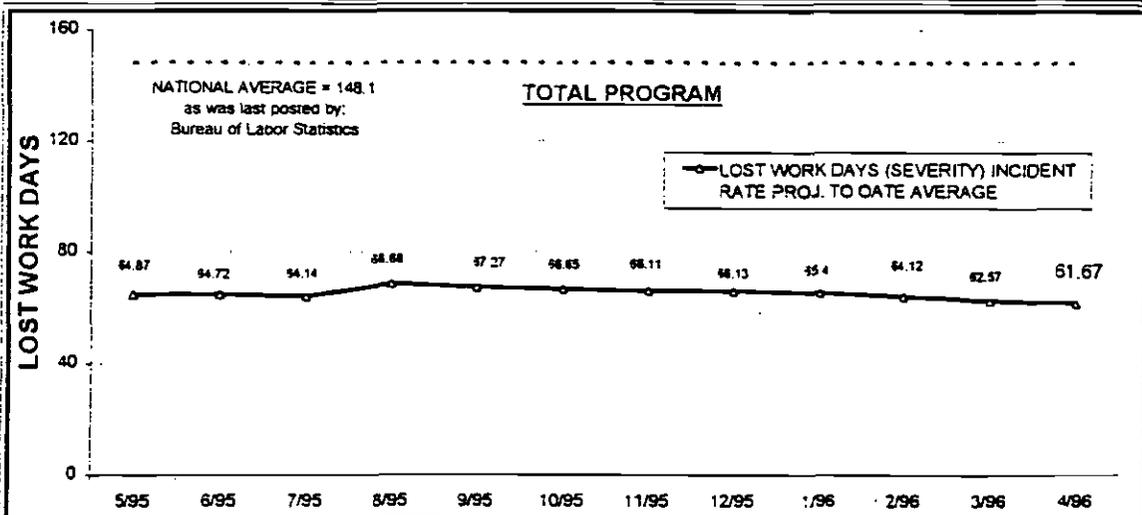
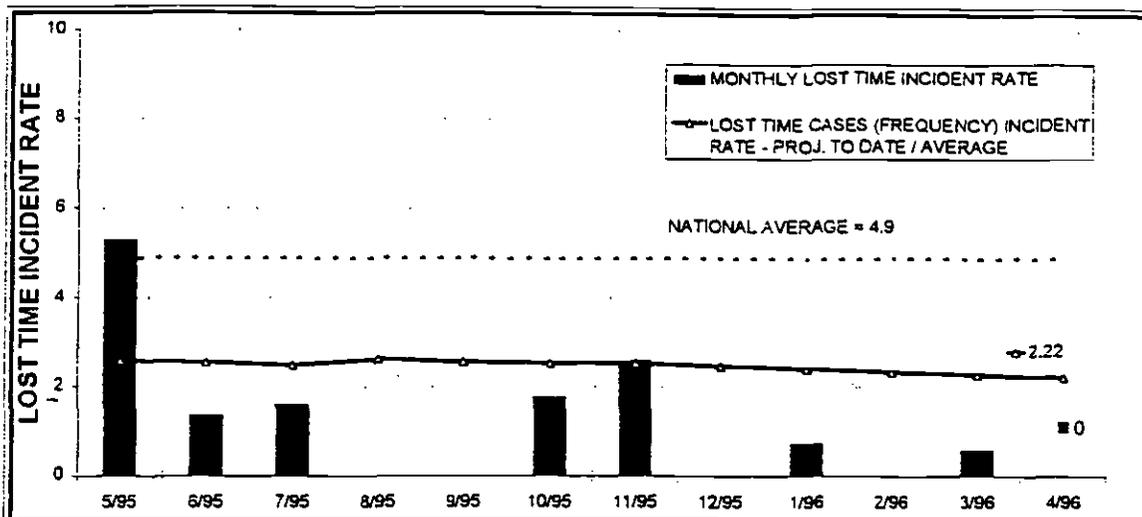
MAY 1996

	METRO BLUE LINE		METRO PASADENA BLUE LINE		METRO GREEN LINE		METRO RED LINE SEGMENT 1		METRO RED LINE SEGMENT 2		METRO RED LINE SEGMENT 3 NM		METRO RED LINE SEGMENT 3 MC		METRO RED LINE SEGMENT 3 ES		VEHICLE ACQUISITION PROJECT		TOTAL PROGRAM		CORP GOAL
	DOLLARS	PERCENT	DOLLARS	PERCENT	DOLLARS	PERCENT	DOLLARS	PERCENT	DOLLARS	PERCENT	DOLLARS	PERCENT	DOLLARS	PERCENT	DOLLARS	PERCENT	DOLLARS	PERCENT	DOLLARS	PERCENT	
CONSTRUCTION	657,487	74.95%	432,444	53.74%	477,238	66.48%	612,270	56.02%	1,143,647	69.70%	828,483	63.17%	0	0	844,383	65.22%	180,644	69.72%	5,176,604	64.78%	
REAL ESTATE	55,262	6.34%	69,259	6.61%	26,047	3.67%	140,000	9.66%	67,773	5.35%	69,078	6.79%	0	0	27,459	2.78%	0	0.00%	495,206	6.20%	
PROFESSIONAL SERVICES:																					
ENGINEERING/DES	89,587	7.83%	117,938	14.65%	83,298	11.60%	221,658	19.29%	165,514	10.09%	90,711	8.92%	0	0	103,892	10.31%	1,700	0.84%	654,297	10.69%	
CONSTR MGMT.	91,642	10.45%	66,076	8.21%	78,213	10.90%	118,429	8.03%	159,288	9.71%	115,918	8.84%	0	0	84,983	8.60%	0	0.00%	712,550	8.82%	
STAFF	17,855	2.01%	44,198	5.49%	24,179	3.37%	95,558	8.59%	55,739	3.40%	59,568	4.54%	0	0	37,565	3.80%	3,840	1.91%	338,320	4.23%	4%
OTHER	14,222	1.62%	18,458	2.29%	17,337	2.42%	32,671	2.25%	21,735	1.32%	39,318	3.00%	0	0	17,358	1.76%	9,237	4.59%	170,337	2.13%	2.5%
SUBTOTAL	183,106	22.01%	246,668	30.65%	203,025	28.28%	466,317	32.16%	402,278	24.52%	305,536	23.30%	0	0	243,796	24.67%	14,777	7.34%	2,075,504	25.97%	20%
CONTINGENCY	963	0.11%	57,607	7.16%	12,757	1.78%	31,432	2.17%	7,935	0.40%	99,992	7.62%	0	0	72,439	7.33%	5,930	2.95%	269,055	3.62%	
PROJECT REVENUE	(29,977)	-3.41%	(1,211)	-0.15%	(1,253)	-0.18%	0	0.00%	(850)	-0.05%	(11,517)	-0.88%	0	0	0	0.00%	0	0.00%	(44,716)	-0.56%	
GRAND TOTAL	877,271	100.00%	604,766	100.00%	717,602	100.00%	1,450,019	100.00%	1,640,781	100.00%	1,311,580	100.00%	0	0	988,079	100.00%	201,351	100.00%	7,991,651	100.00%	

*METRO RED LINE SEGMENT 3 MID-CITY FORECAST NOT AVAILABLE.
NOTE: Data reflects Current Forecast.

TOTAL METRO
SAFETY SUMMARY

Prepared by:
MASS TRANSIT GROUP



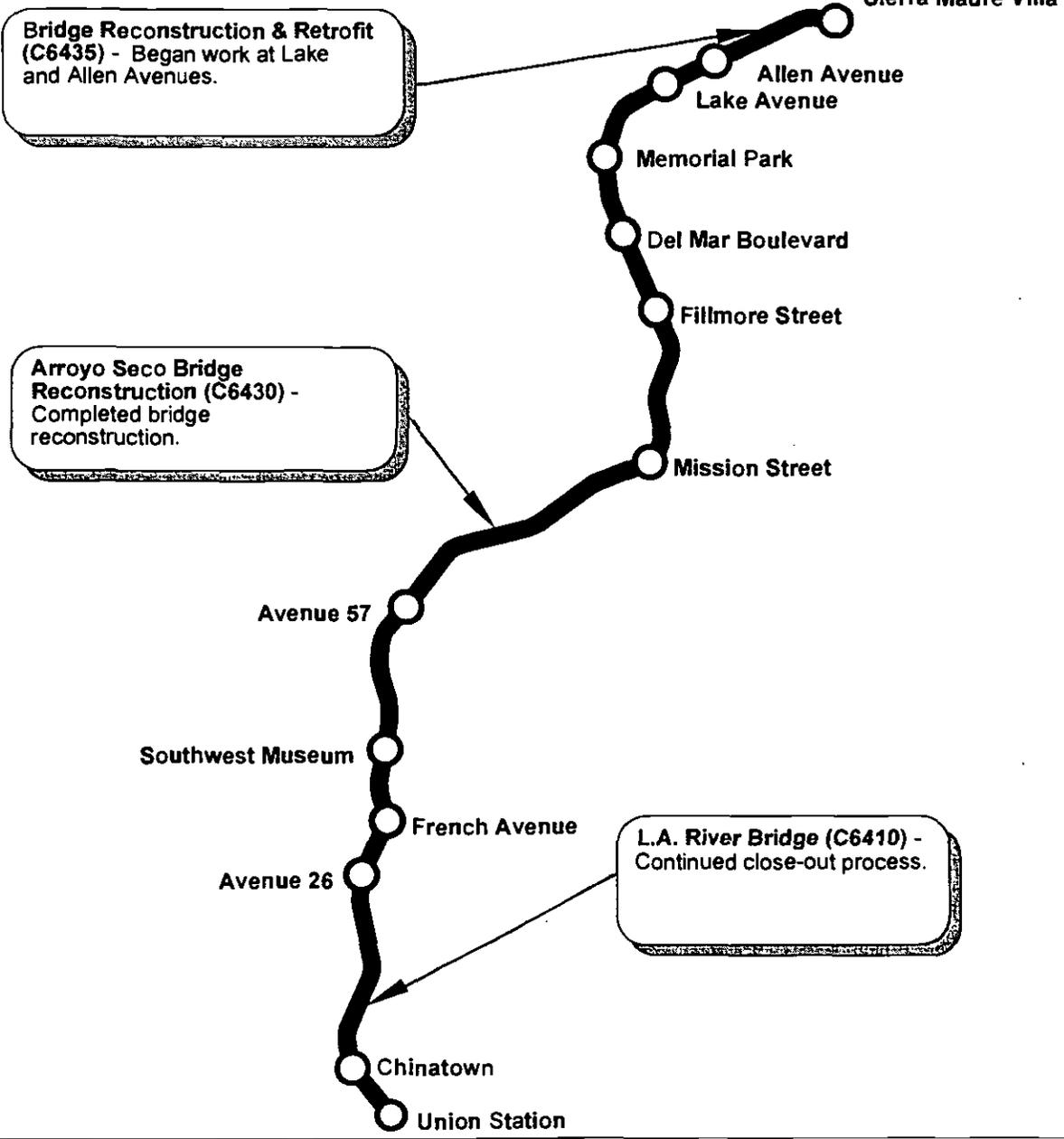
METRO PASADENA BLUE LINE

EXECUTIVE SUMMARY

METRO PASADENA BLUE LINE
Summary Status Report
Period Ending - May 31, 1996



MAJOR ACTIVITIES THIS PERIOD



SYSTEMWIDE ACTIVITIES

- MTA continued to work with EMC to develop a detailed Project Implementation Plan (PIP) for CWO 037 for \$3.0M which defines the work scope, design requirements and path-forward for resumption of critical design work.
- MTA continued to work with EMC to detail scope, time and resources required for resumption of final design: design on critical contracts must resume by July 1, 1996 or the May 2001 ROD will begin to be impacted.
- MTA continued preparation of a draft report for submittal to the MTA Board in June 1996 which assesses the Project cost and schedule for reasonableness based on current scope definition and design status.
- Urban Planning consultants and the MTA continued to work with community representatives regarding work scope changes.
- MTA Environmental Group continued evaluation of the potential for additional or Supplemental Environmental Impact Statements (SEIR's) due to work scope changes.
- Caltrans executed the Fund Transfer agreement to allocate \$28.0M from the State Highway Account Fund.

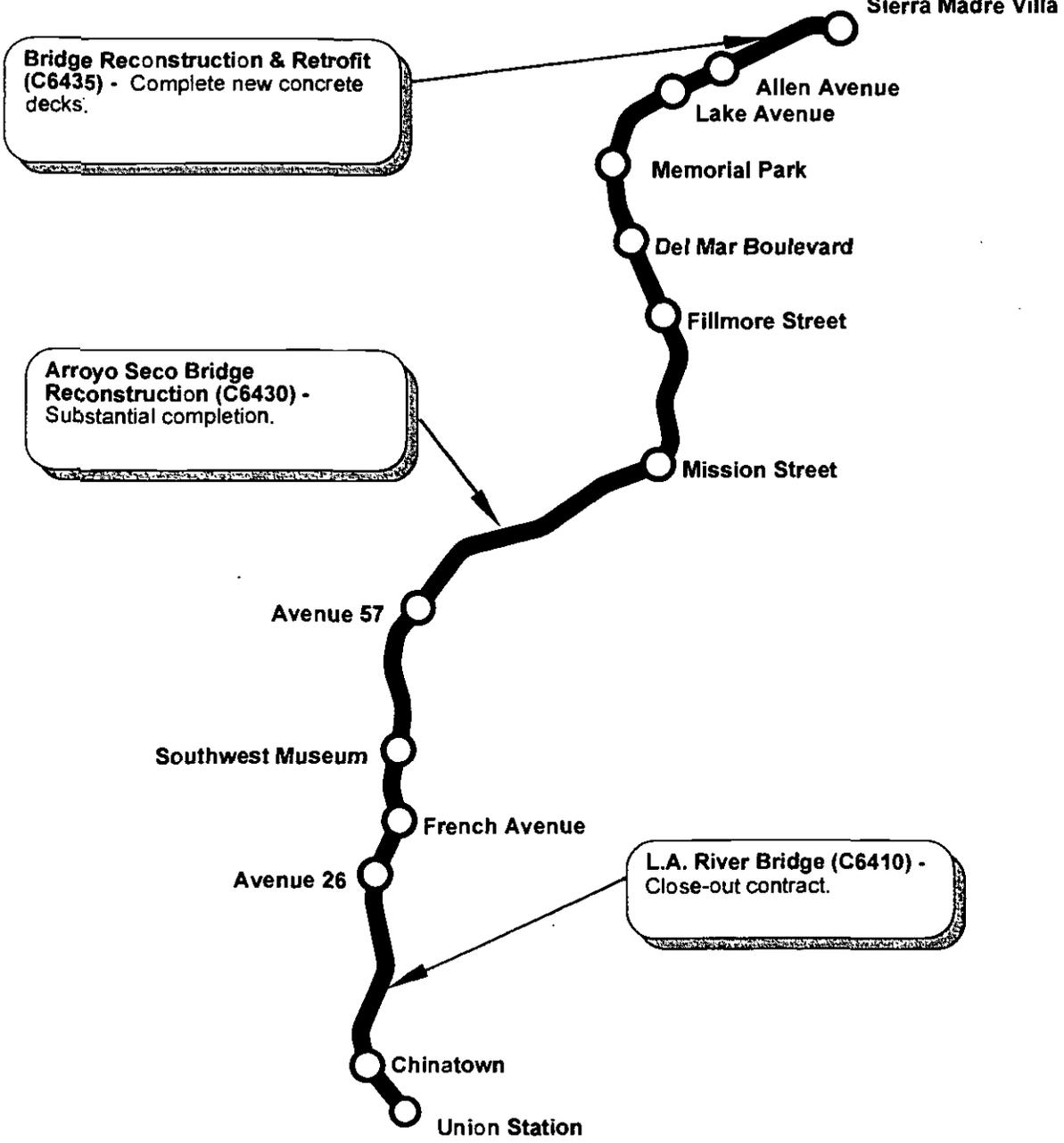
METRO PASADENA BLUE LINE

Summary Status Report

Period Ending - May 31, 1996



MAJOR ACTIVITIES NEXT PERIOD



- #### SYSTEMWIDE ACTIVITIES
- MTA will finalize the draft report for submittal to the MTA Board during the period which assesses the Project cost and schedule for reasonableness based on current scope definition and design status.
 - MTA Environmental Group will issue a work order for consultant analysis of impacts associated with cost reduction work scope changes.

METRO PASADENA BLUE LINE

Summary Status Report

Period Ending - May 31, 1996



BUDGET

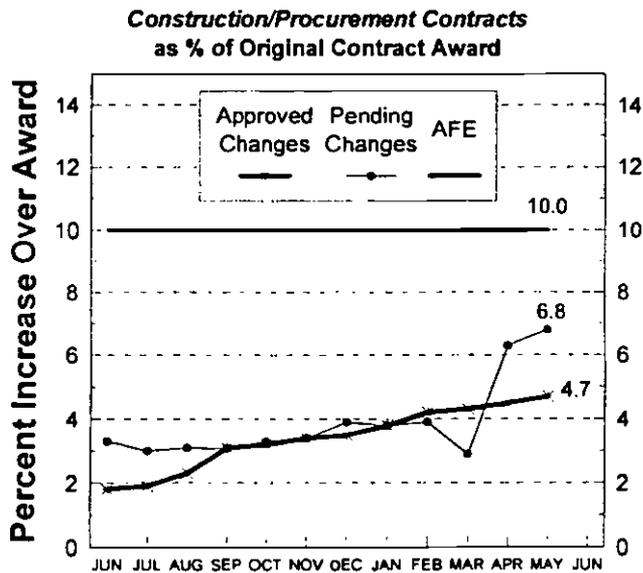
	Amount (\$ in mil)	Change from Last Month (\$ in mil)
Original Budget	841	None
Approved Budget	804	None
Current Forecast	804	None

NOTE: Due to the implementation of the new Financial Information System (FIS), actual expenditure data for May is subject to review and verification. The expenditure module for FIS is expected to be fully implemented by the June Project Manager's Status Report (PMSR).

BUDGET ANALYSIS

- The Original Budget of \$841.0M was formally adopted in January 1993 and was based on a November 1997 ROD.
- The Approved Budget and Current Forecast are based on Value Engineering/Cost Containment scope changes and a May 2001 ROD adopted in February 1996.
- The budget is predicated on engineering re-design starting on critical contracts by July 1, 1996. Activities required to facilitate re-start of engineering are behind schedule. These delays may result in additional cost to the Project.
- Defining a detailed work scope in a timely fashion and freezing the design are critical to maintaining the Project budget.

CONTRACT CHANGES



CONTRACT CHANGE ANALYSIS

- Approved and pending changes processed to date are less than the AFE values. In general, the cumulative value of changes is forecast to remain below the cumulative value of AFE's.
- Pending Changes increased only slightly during the period, primarily for Contract C6435, Reconstruction & Retrofit of Concrete & Steel Bridges (CN 23.00 - Load Tests For CIDH Piles for a credit amount was canceled).
- Approved Changes also increased only slightly, primarily for WACN's that were issued for Contract C6430, Arroyo Seco Bridge Reconstruction (CN 68.00 - Construct Energy Dissipation Structure and CN 70.00 - Provide Security Fencing for Project Site Protection).

METRO PASADENA BLUE LINE

Summary Status Report

Period Ending - May 31, 1996



SCHEDULE

		Change from Last Month
Current ROD	May 2001	None
Design Progress*	80.3%	+0.2
Constr. Progress	7.1%	+0.2
Critical Path Float (Calendar Days)	-63 days	-35 days

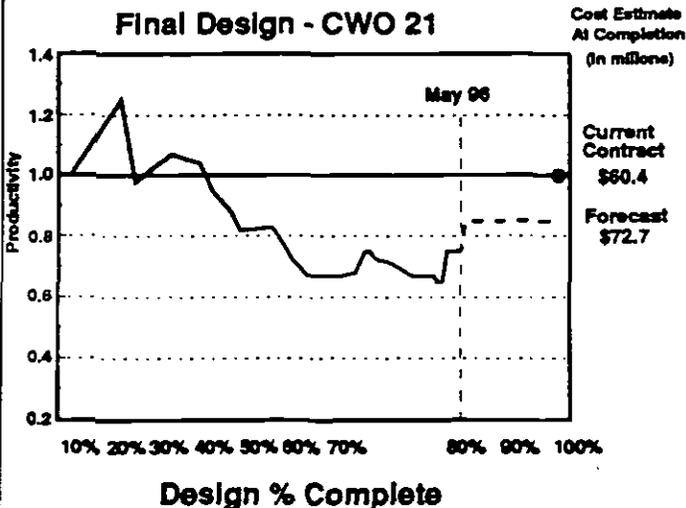
*Based on original design work scope; design will be rebaselined pending an evaluation of design status, definition of new work scope & preparation of an execution plan.

NOTE: MTA will consolidate contracts into 26 packages (4 current contracts plus 22 to be awarded) to provide an economies-of-scale cost advantage & reduce administration costs. The new packaging will be trended and included in the baseline schedule in July 1996.

SCHEDULE ANALYSIS

- A Project Implementation Plan (PIP) is being prepared which defines the Project scope and resources necessary to start final design engineering.
- Redesign of critical contracts must occur by July 1, 1996 to maintain the May 2001 ROD. The May schedule update shows negative float because activities required to facilitate engineering re-start are behind plan.
- The Project team is working to mitigate the effect of this negative float by identifying activities in the design and construction durations that can be compressed or resequenced.
- The schedule may be further impacted by the length of time required to (1) prepare a Supplemental Environmental Impact Statement for scope changes, if required, and (2) reconcile design criteria revisions for scope changes.
- MTA staff is preparing a report for submittal to the Board in June 1996 which assesses the schedule for reasonableness.

EMC COST PERFORMANCE



NOTE: The chart above reflects information for the EMC's current CWO only (CWO No. 021). Additional CWO's to authorize post design-shutdown work and design for Value Engineering/Cost Containment items are pending.

EMC COST PERFORMANCE ANALYSIS

- Design has been on hold since June 1995 initially due to resolution of outstanding CCR's and cost overruns; later, it was concurrently on hold pending MTA Board decision on Value Engineering & Cost Containment items
- The final design forecast for CWO 021 exceeds the EMC Contract Value, resulting in a Productivity factor of less than 100%. An amendment was submitted to the Board in April to resolve CCR's and increase the contract value. CWO 021 will be closed out pending resolution of additional amendment(s).
- MTA Board action in February 1996 established a new budget & initiated the process of design re-start pending preparation of a PIP. CWO 037 for \$3.0M is for development of the PIP, definition of final design requirements and initial resumption of some design work.
- The final design cost has been impacted by (1) redesign for cost reduction items, (2) level-of-effort costs incurred during the "design hold" period, (3) approved and pending CCR's and (4) cost overruns to date.

METRO PASADENA BLUE LINE

Summary Status Report

Period Ending - May 31, 1996



CONSTRUCTION SAFETY STATISTICS

		Change from <u>Last Month</u>
Recordable Injury Rate		
1994 National Average	12.2	
Project Rate (Cum.)	3.3	-0.1
Lost Time Rate (Frequency)		
1994 National Average	4.9	
Project Rate (Cum.)	0.0	None
Lost Work Days (Severity)		
1991 National Average	148.1	
Project Rate (Cum.)	0.0	None

NOTE: Statistics are based on April data.

CONSTRUCTION SAFETY SUMMARY

- Project is producing over 15,000 construction work hours per month and has continued with zero Lost Time cases and no lost work days.
- Continued with eight (8) OSHA-200 recordable cases to date, resulting in a further reduction of the cumulative project rate.

AREAS OF CONCERN

NEW

Item (Date Initiated: May 1996)

Supplemental Environmental Impact Statement (SEIS)

Concern/Impact

Changes to the Pasadena Blue Line work scope may result in the need for a SEIS. Some of the elements included in the Value Engineering and Cost Containment work scope reductions will weigh in the requirement for a SEIS. If a SEIS is required, there may be an impact to the May 2001 Project ROD of six to nine months and a possible cost impact of \$2.0M to \$3.0M per month for each month the ROD slips.

Status/Action

MTA Construction and Engineering staff are working with EMC to define the final work scope, which will ultimately determine if a SEIS is required. If a SEIS is required, the process will take approximately one year to complete. The MTA management team will evaluate what work can be done concurrently to minimize the impact to the schedule.

METRO PASADENA BLUE LINE

Summary Status Report

Period Ending - May 31, 1996



AREAS OF CONCERN (Con't)

NEW (Con't)

Item (Date Initiated: May 1996)

Reconciliation of Design Criteria

Concern/Impact

The May 2001 ROD may be impacted by the length of time required to reconcile design criteria revisions resulting from Value Engineering, Cost Containment and community initiated scope changes. The criteria must be reconciled by August 8, 1996 in order to avoid impacting the ROD.

Status/Action

MTA Construction and Engineering staff are working with EMC to define the final work scope, which is required before the design criteria can be reconciled. In the interim, the MTA management team is taking steps to allow for a waiver or exemption to the procedure to be granted so design can resume. Meetings were held during the period between MTA Engineering and Quality Assurance staff, resulting in direction to the EMC to prepare a draft reconciliation of criteria by June 30, 1996.

ONGOING

Item (Date Initiated: April 1996)

Community Concurrence With Final Design

Concern/Impact

Timely community concurrence with design of the stations and line segments is critical to finalizing design, re-starting engineering, validating the Project cost/schedule and minimizing the potential of engineering cost overruns. Consensus must be obtained for station design changes resulting from Value Engineering and Cost Containment reductions as well as other issues raised by various communities. For example, issues relating to the transportation center proposed by the City of Pasadena may impact the final station and line segment design at Del Mar Station; selection of a Chinatown pedestrian linkage alternative may impact the final Chinatown Aerial Structure and station design; etc.

Status/Action

MTA Public Affairs and Construction staff are working closely with community representatives and have obtained consensus for the most part on Value Engineering and Cost Containment reductions. Other design issues, such as street running of vehicles, location of the French St. platform, etc., are being evaluated by the MTA Construction and Engineering staff. These issues will be defined for scope, cost and schedule impacts and will be presented to the MTA Board.

METRO PASADENA BLUE LINE

Summary Status Report

Period Ending - May 31, 1996



AREAS OF CONCERN (Con't)

ONGOING (Con't)

Item (Date Initiated: March 1996)

Engineering Design Resumption

Concern/Impact

Final design for Contract C6450 and other near critical contracts must resume by July 1, 1996 or the May 2001 ROD may be in jeopardy. Engineering cannot resume until work scope definition is completed and included in a Project Implementation Plan (PIP). It is unlikely this PIP will be completed and approved in sufficient time to allow section designers to be on-board and available to start work by July 1, 1996. If the ROD slips, there will be a ROM cost impact of \$2.0M to \$3.0M per month due to escalation and additional administration costs.

Status/Action

The May schedule update shows activities required to facilitate re-start of engineering are behind schedule, resulting in negative float of -63 calendar days. In order to minimize impacts to the July 1, 1996 target date, a milestone schedule has been established which identifies the actions required to facilitate engineering re-start on the most critical contracts and the responsible parties. It is anticipated that by the first week in June agreement will be reached on the scope definition, deliverables and controls contained in the interim PIP. Approval of this interim PIP will allow engineering to resume and will provide the basis to begin preparation of a permanent PIP for final design. As part of the baseline schedule validation, MTA is also analyzing activities where schedule can be realistically reduced to mitigate the delay to the May 2001 ROD.

Item (Date Initiated: July 1993)

Real Estate

Concern/Impact

The real estate acquisition effort lags behind in support of line segment contracts as identified in the current schedule. Many parcels require immediate certification action to start the acquisition process.

Status/Action

The entire real estate acquisition effort and project requirements are currently being re-evaluated based on the new Project work scope, schedule and budget approved by the MTA Board on February 28, 1996. The MTA and MTC Engineering and Construction Management staff need to provide a list to Real Estate which identifies the most critical parcels to support construction NTP dates. MTC Project Control is currently developing a Real Estate Schedule that supports the May 2001 ROD and will provide a basis for tracking real estate acquisition progress.

METRO PASADENA BLUE LINE

Summary Status Report

Period Ending - May 31, 1996



AREAS OF CONCERN (Con't)

RESOLVED

Item (Date Initiated: March 1996)

AB1869 Cost Impact

Concern/Impact

AB1869, requiring all change orders to be reviewed by MTA Legal and Contracts staff, was passed after the \$803.9M Project budget was developed. Passage of AB1869 may result in additional time and cost to process changes for the Project.

Status/Action

All cost/schedule impacts associated with AB1869 cannot be determined at this time. However, MTA Legal and Contracts departments have at least identified the need for additional staff to support the AB1869 requirements. MTA Project Control for the Pasadena Blue Line is working with the Contracts group to quantify impacts. When this analysis is completed, a trend will be prepared by MTA Project Control staff to increase the Professional Services forecast and decrease the Project Contingency.

Item (Date Initiated: April 1995)

EMC Design Cost Amendment

Concern/Impact

The Final Design costs will exceed the approved Contract Work Order No. 021.

Status/Action

The MTA Board approved Amendment No. 7 at the April Board meeting for \$3.6M. This amendment addressed some remaining Contract Change Requests (CCR's). CWO No. 021 will be closed-out pending resolution of remaining CCR's, including cost overruns. All final design work, which includes the remainder of baseline work scope and new or revised work scope, will be completed under a new contract work order.

Item (Date Initiated: May 1994)

Marmion Way Corridor

Concern/Impact

The City of Los Angeles has identified Betterments to be made along Marmion Way between Avenues 50 and 60, resulting in increased project design and construction costs.

Status/Action

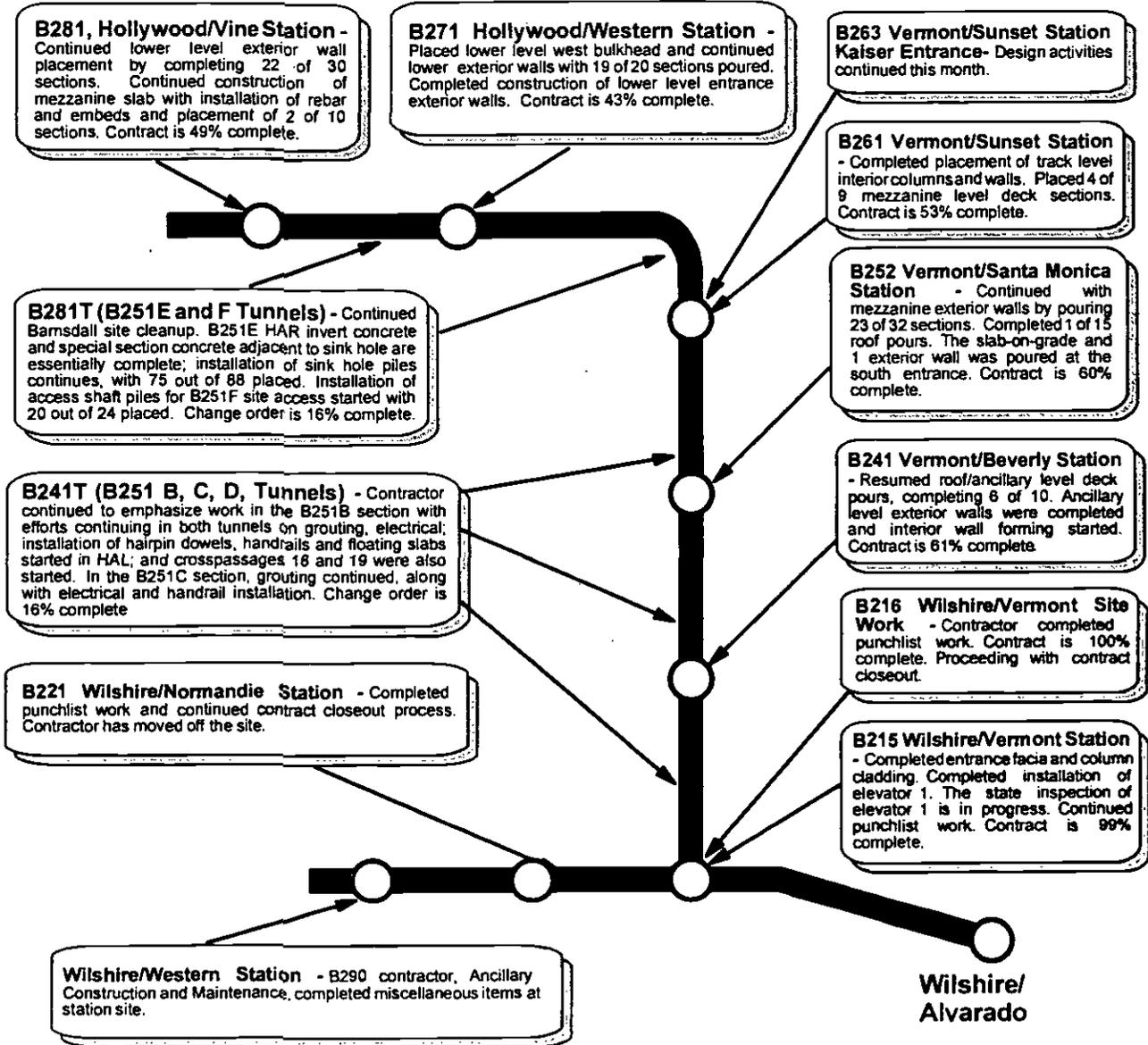
The extent to which the City of Los Angeles can require betterments is subject to California State Law. Although the MTA Board has adopted a Cost Containment/Value Engineering recommendation to negotiate a new Master Cooperative Agreement covering betterments, it is unlikely that betterment agreements can be changed until State law is modified.

METRO RED LINE SEGMENT 2

EXECUTIVE SUMMARY



Major Activities - This Period

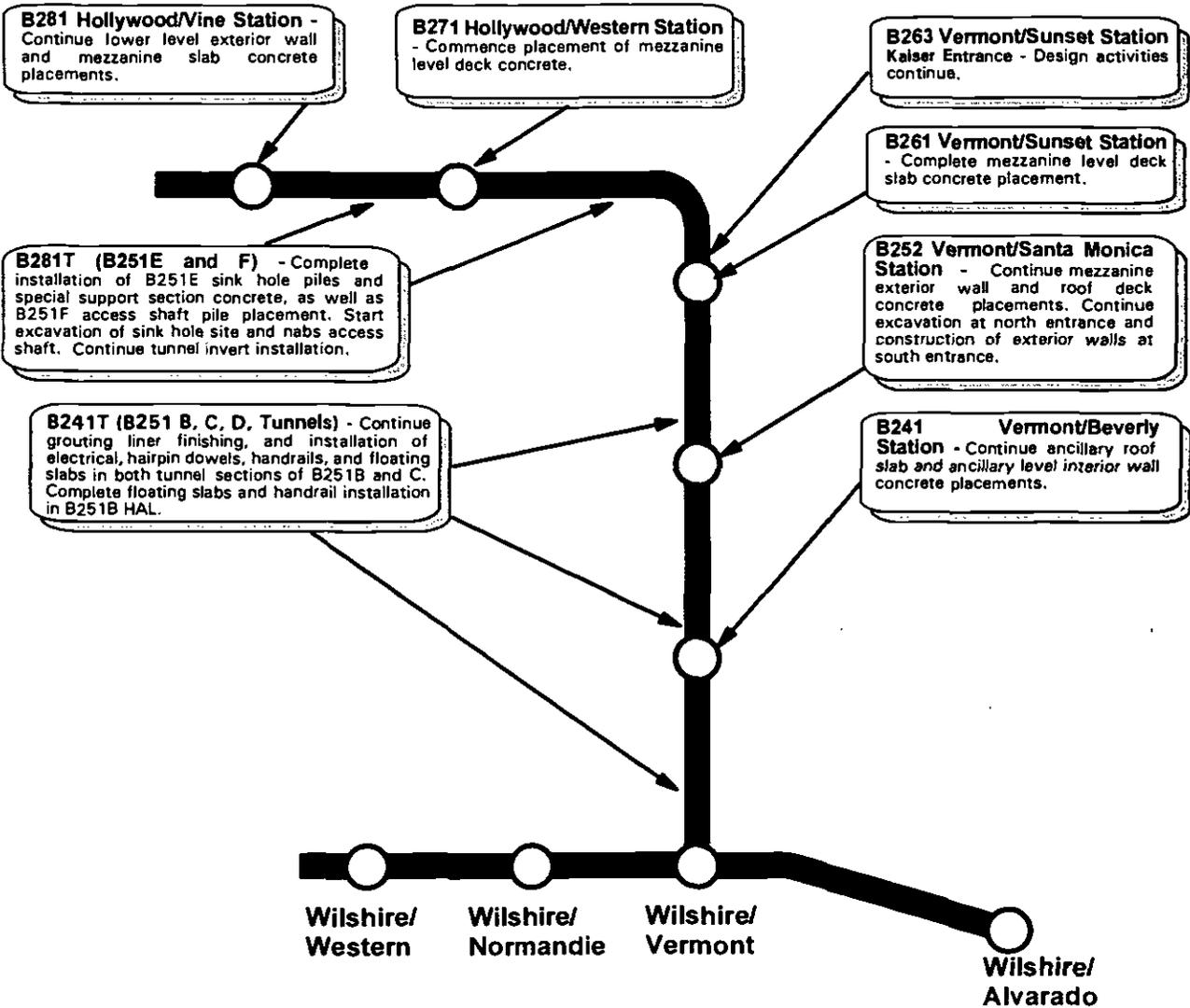


SYSTEMWIDE ACTIVITIES

Completed installation of the Wilshire/Vermont entrance elevator and escalators. Continued system integration testing at all stations and Westlake/MacArthur Park pocket track. Began pre-revenue operations on May 19, 1996.



Major Activities - Next Period



SYSTEMWIDE ACTIVITIES

Complete system integration testing at all stations and Westlake/MacArthur Park pocket track. Begin Wilshire Corridor revenue operations on July 13, 1996.

METRO RED LINE Segment 2 Summary Status Report Period ending - May 31, 1996



BUDGET

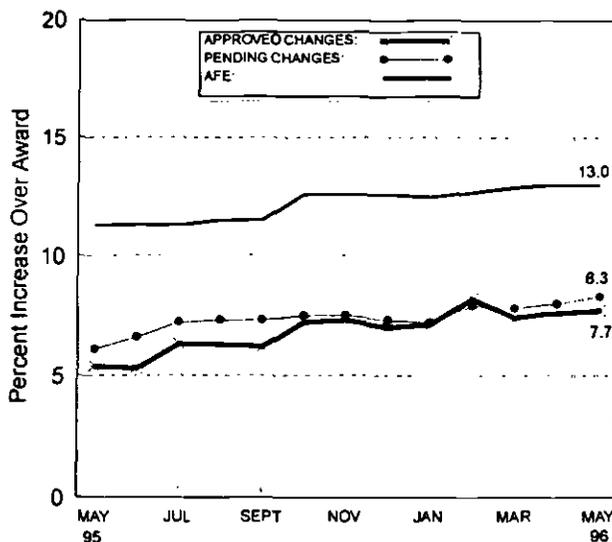
	Amount (in \$ mil)	Change from Last Month (in \$ mil)
Original Budget	1,446	None
Approved Budget	1,641	None
Current Forecast	1,641	None

BUDGET ANALYSIS

Due to the implementation of the new Financial Information System (FIS), actual expenditure data for May will not be available. The expenditure module for FIS is expected to be fully implemented by the June Project Manager's Status Report (PMSR).

CONTRACT CHANGES

*Construction/Procurement Contracts
as % of Original Contract Award*



CONTRACT CHANGE ANALYSIS

The percent of approved and pending change values shows a slight increase this period. The approved changes are attributable to the progress of work on the Wilshire Corridor and Work Authorized Change Notices (WACNs) on Vermont/Sunset Station. The significant approved changes include:

- B201, Pocket Track & Line, CN 114.01, grout tunnel leaks at specified locations; and CN 116.00, Settlement to American Caisson for delay and disruption claim.
- B215, Wilshire/Vermont Station Stage II, CN 27.00, ancillary level duct work and cable trays; and CN 94.02, revise power, circuit breakers, and control for B216 lights.
- B216, Wilshire/Vermont Site Restoration, CN 8.00, Addition of Engineering Filter Fabric in Bus way.
- B261, Vermont/Sunset Station, WACN 38.01, Architectural Design Changes; WACN 94.01, Sprinkler Piping Sleeves; and WACN 95.00, Electrical and Mechanical Design Changes.

The significant pending changes include:

- B215, Wilshire/Vermont Station Stage II, CN 77.00, Overage of Unit Line Item—Exterior Wall Concrete.
- B241, Vermont/Beverly Station, CN 47.01, Temporary Decking Quantity Overrun.
- B281, Hollywood/Vine Station & Crossover, CN 23.02, Architectural Design Changes.

METRO RED LINE Segment 2 Summary Status Report Period ending - May 31, 1996



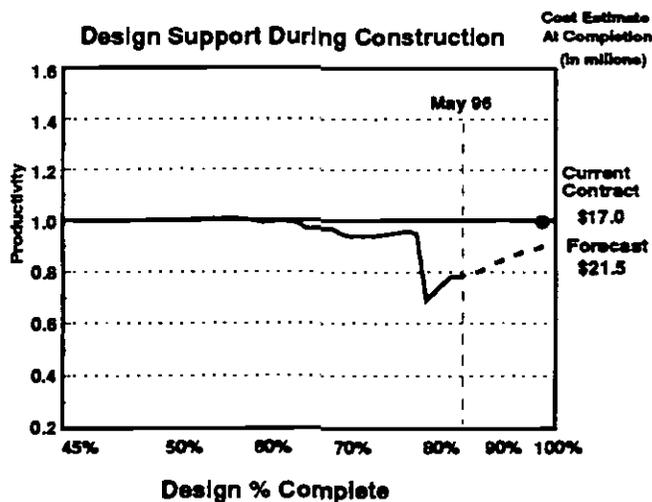
SCHEDULE

<u>Wilshire Corridor</u>		Change from Last Month
Current ROD	July 13, 1996	0 days
Design Progress	100%	None
Critical Path Float	+13 Days	0 days
<u>Vermont/Hollywood Corridor</u>		Change from Last Month
Current ROD	Dec. 31, 1998	None
Design Progress	99%	None
Critical Path Float	-82 Days	0 days
Const. Progress	74.1%	1.1%

SCHEDULE ANALYSIS

- The Grand Opening for Wilshire Corridor is scheduled for July 13, 1996. The positive float remains at positive 13 calendar days. To date, 55 tests have been completed; 27 tests are 80% or greater completed; 3 tests are 50% or more completed; the 18 remaining tests have undergone some pre-test checking. System integration testing is 79% complete. Substantial completion of system integration testing is forecast for June 30, 1996.
- The critical path continues through pre-revenue operations completion, leading to revenue operations on July 13, 1996.
- Vermont/Hollywood Corridor critical path continued through Contract B271, completion of Hollywood/Western station structure concrete; B610 trackwork installation; B620, train control installation; and system integration testing and pre-revenue operations.
- Concrete placement activities at the B271 station continued as planned this period. To mitigate schedule slippage by the Contractor, Parsons-Dillingham and the Contractor are reviewing the Contractor's staffing to ensure adequate manpower. In addition, Parsons-Dillingham continued to review and return submittals earlier than planned so that future concrete work can proceed unimpeded. It is expected that mezzanine concrete activities will proceed faster than planned, mitigating the delays and supporting the critical trackwork access milestone on time.

EMC COST PERFORMANCE



EMC COST PERFORMANCE ANALYSIS

- The EMC Cost Performance chart represents the cost performance for design support during construction (DSDC) on a cumulative to-date basis.
- This chart compares the actuals versus the earned values in terms of work hours and reflects an estimated cumulative-to-date Cost Performance Index (CPI) through May 1996 of 0.78.
- The actual physical numbers of Requests for Information (RFIs) and other design services, submittals, and Change Notices for both the Wilshire and Vermont/Hollywood Corridors continue to significantly exceed the number budgeted. As a result, the CPI will continue to decline until additional budget is available to earn against. With the anticipated approval of the Fiscal Year 1997 Consultant Change Request, the CPI will improve significantly. The current project forecast remains within Segment 2's Estimate at Completion budget.

**METRO RED LINE Segment 2
Summary Status Report
Period ending - May 31, 1996**



**CONSTRUCTION SAFETY
STATISTICS**

Project-to-Date Rates

		Change From Last Month
Recordable Injury Rate		
1994 National Average	11.8	
Project Rate	20.6	-0.2
Lost Time Rate (Frequency)		
1994 National Average	4.9	
Project Rate	2.7	-0.1
Lost Work Days (Severity)		
1991 National Average	148.1	
Project Rate	73.8	+0.3

Segment 2 is incurring over 140,000 work hours per month.

(Based on April statistics)

**CONSTRUCTION SAFETY
SUMMARY**

- Nineteen active contracts were completed without a Lost Time Injury.
- Year-to-Date, Segment 2 has produced 9.3 recordable injuries per 200,000 hours of work. This is 20% below the National Average of 11.8.
- Lost Time Injuries (Year-to-Date) have occurred at a rate of 0.7 per 200,000 work hours. This is less than 20% of the National Average of 4.9.

NEW

Item (Initiated May 1996)

Vermont/Sunset Station Kaiser Entrance Construction

Concern/Impact

The B261 street restoration milestone is forecasted to complete significantly later than the required completion date to allow the critical construction activities to proceed. The B263 contract consists of building an entrance into the Vermont/Sunset Station from Kaiser Hospital on the northwest corner of the Vermont and Sunset intersection. The coordination of the Notice to Proceed and site availability is contingent on completion of the B261 street restoration. To facilitate the Work Traffic Control Plan (WTCP) and allow B263 Kaiser Hospital Second Entrance work to proceed, the B261 contract must complete with the final phase of the WTCP. As part of several changes, critical portions of work (emergency exit and air shaft) were modified and deleted from Contract B261 and were added to Contract B263 construction. The emergency exit and air shaft in contract B263 are required for the Vermont/Hollywood Corridor ROD.

Status/Action

The CM is preparing an analysis to evaluate several scenarios:

- 1 Allow the B263 contractor access when B261 has completed street restoration at its current date of March 12, 1998.
- 2 Prepare Contract B263 as a Change Order to the B261 contract.
- 3 Accelerate the B261 Contractor on all work impacting street restoration.

METRO RED LINE Segment 2
Summary Status Report
Period ending - May 31, 1996



ONGOING

Item (Initiated March 1996)

Vermont/Hollywood Corridor Trackwork Access

Concern/Impact

As a result of the delays in starting the B251B, C, and D work packages, the Contractor may need to alter station construction sequences at B241 for packages B and C and at B261 for package D. These changes have the potential for influencing the current target date for track access and other station interim milestones.

Status/Action

The contractors have prepared preliminary schedule assessments of the potential impacts and have submitted them for construction management review and analysis. The MTA and the CM are working with the contractors to develop a plan to support the project objectives.

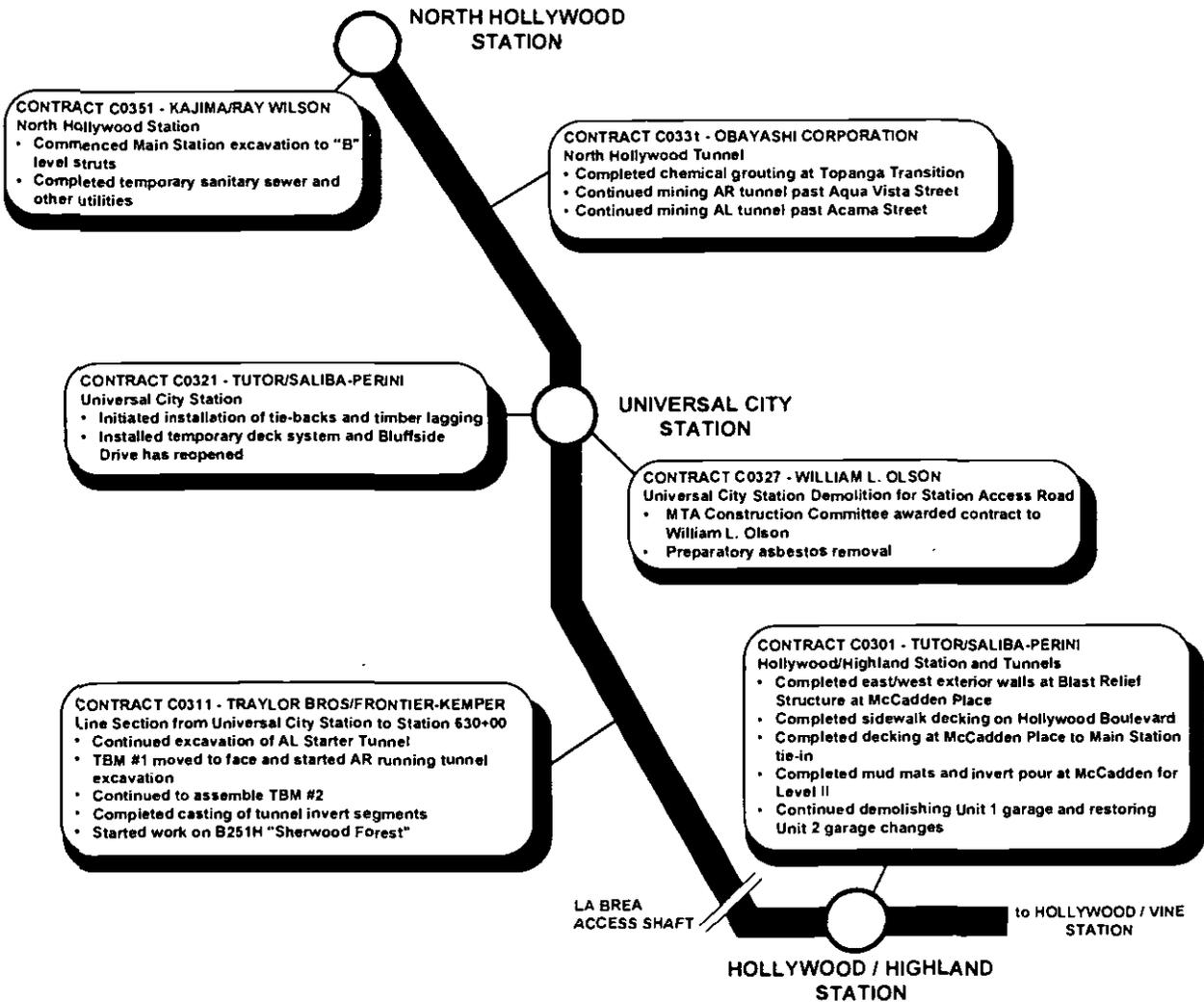
**METRO RED LINE SEGMENT 3
NORTH HOLLYWOOD EXTENSION**

EXECUTIVE SUMMARY

METRO RED LINE - Segment 3 North Hollywood
Summary Status Report
 Period Ending - May 31, 1996



MAJOR ACTIVITIES THIS PERIOD



SYSTEMWIDE ACTIVITIES

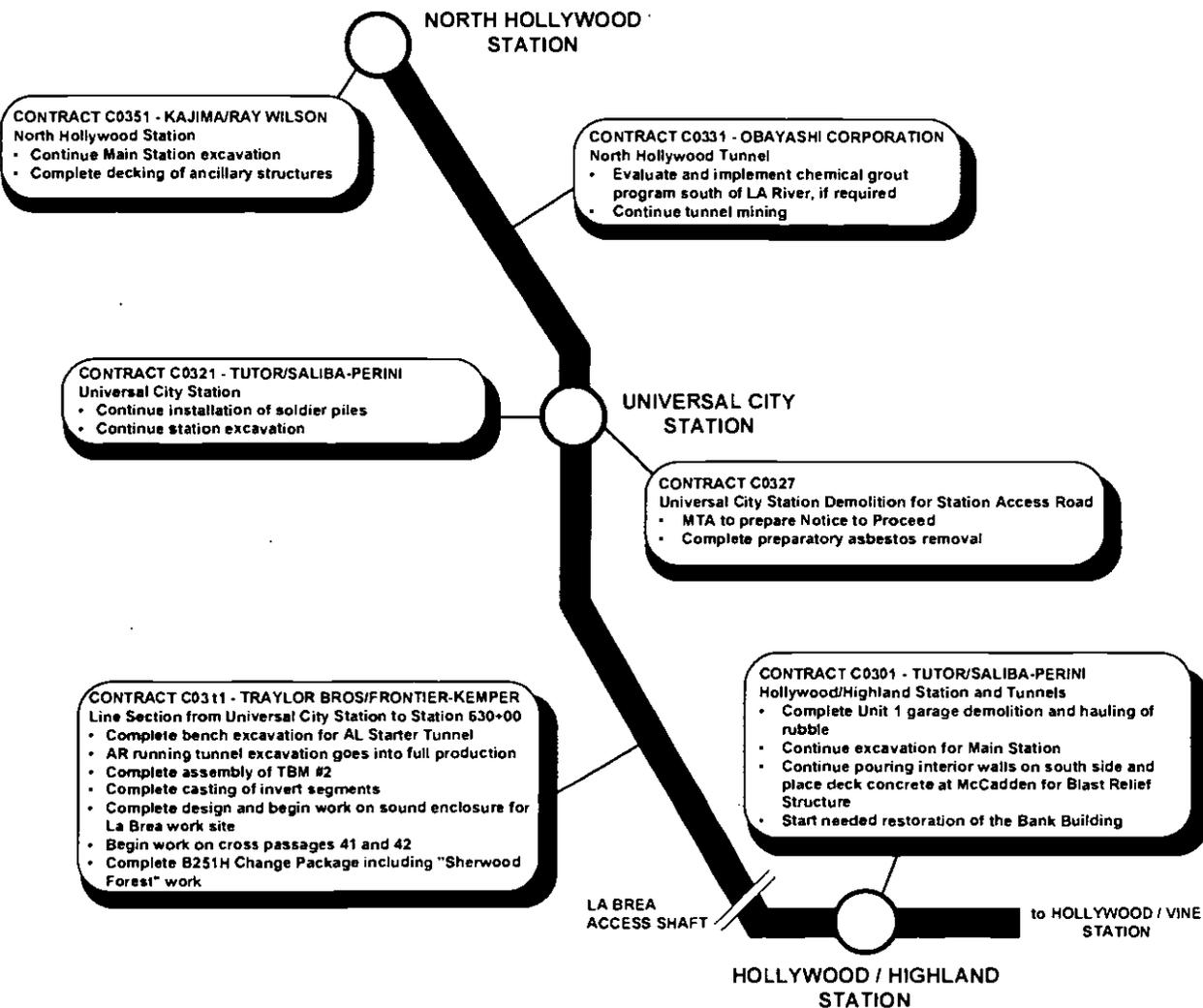
Contract B620 (Automatic Train Control) responded to trackwork installation details

Contract H0631 (Traction Power System Installation) continued design toward pre-final submittal

METRO RED LINE - Segment 3 North Hollywood
Summary Status Report
 Period Ending - May 31, 1996



MAJOR ACTIVITIES NEXT PERIOD



SYSTEMWIDE ACTIVITIES

- Contract B620 (Automatic Train Control) responding to trackwork installation details
- Contract H0631 (Traction Power System Installation) continue design toward pre-final submittal

METRO RED LINE - Segment 3 North Hollywood
Summary Status Report
Period Ending - May 31, 1996



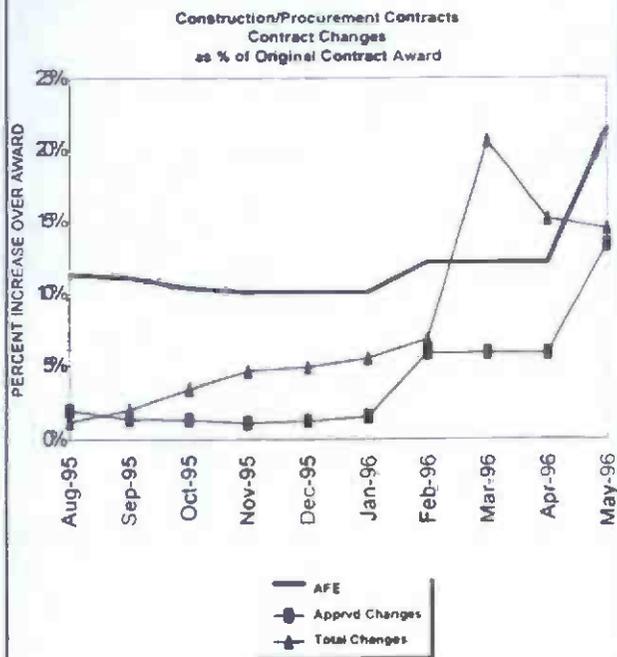
BUDGET

	Amount (in \$ mil)	Change from Last Month (in \$ mil)
Original Budget	1310.8	None
Approved Budget	1313.8	None
Current Forecast	1311.6	None

BUDGET ANALYSIS

- The Original Budget of \$1,310.8M was established by MTA Board action on March 25, 1993 with the approval of the Full Funding Grant Agreement (FFGA) with the FTA. The budget has been modified on three occasions through the Project Budget Change Request process for a net increase of \$3.02M, resulting in an Approved Budget of \$1,313.8M. This \$3.02M increase provides for Other Locally Funded Activities (New Requirements) for Non Revenue Connector and Artwork in Stations.
- The Current Forecast is the estimate of total project cost with all invoices paid and all obligations satisfied. The Current Forecast is \$1,311.6M or \$0.8M over the Original Budget. This increase over the Original Budget is due to addition of Other Locally Funded Activities such as the Artwork Program.
- The Current Forecast did not change this month, although the Construction Element did experience an overall increase of \$6.1M. This increase was funded from Project Contingency.
- Due to the implementation of the new Financial Information System (FIS), actual expenditure data is not available. The expenditure module for FIS is expected to be fully implemented as soon as possible.

CONTRACT CHANGES



CONTRACT CHANGE ANALYSIS

- The sum of Approved and Pending changes now shows an increase of 14.47% over Contract Award Values, but less than the current AFE amount, which itself has increased from 12.11% to 21.41% this period.
- There was a significant increase in the value of Approved Changes this period, from 5.84% to 13.34%, primarily as a result of the values shown in the Project Change Activity Summary - Financial Status Report for Contract A650 (Passenger Vehicles Procurement). Approved Changes on this original \$23M contract now are reported as over \$36M, resulting in an increase of its AFE to \$62.6M. The appropriate sharing of this contract's costs and changes to Segment 3 are in review. Cost details reflect the \$36.6M Contract A650 Approved Changes, and other minor approvals adjustments to Contracts C0301, C0311, C0331 and C0351.
- The value of Pending Changes drastically reduced this reporting period as a result of Contract A650 Pending Changes now being approved, a \$36.6M reduction. Contract C0301 (Hollywood/Highland Station and Tunnels) also shows a \$3M reduction in Pending changes, with other nominal adjustments being made to Contracts C0311, C0321, C0331 and C0351.

Footnote: The information provided above reflects a cut-off date of May 20, 1996. Current changes since that date may not be included.

METRO RED LINE - Segment 3 North Hollywood
Summary Status Report
Period Ending - May 31, 1996



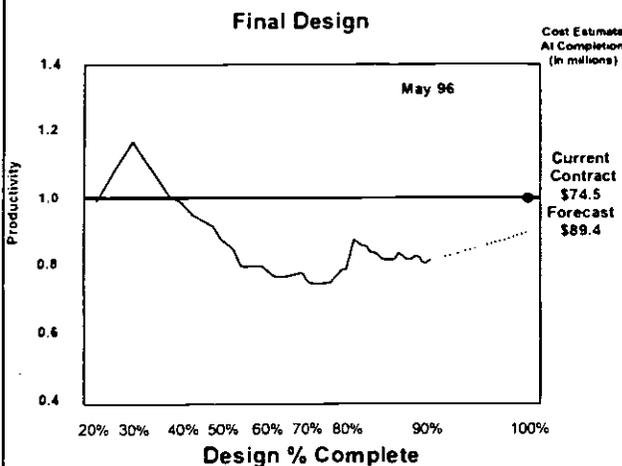
SCHEDULE

		Change from Last Month
Current ROD	September 2000	0
Design Progress	90.2%	+0.1%
Construct. Progress	23.9%	+1.8%
Critical Path Float	-135 Cal. Days	-10

SCHEDULE ANALYSIS

- Project critical path changed during this period from -125 to -135 calendar days. Forecast project completion date is September 29, 2000, compared to the official ROD date of May 17, 2000. The forecast is within the Full Funding Grant Agreement schedule obligation date of December 2000.
- The additional delay for this period is due to a forecasted later assembly of TBM #2 on Contract C0311 (Line Section from Universal City Station to Station 630+00). Mitigation is likely to be achieved through accelerated testing operations.
- Impacts to schedule, due to seasonal springs protections, are currently being assessed.
- Systems and pre-revenue operation schedules are being reviewed with the expectation of modifying these activities, in part, to recover from the currently forecasted delays. Changes will be incorporated in the June schedule update.
- Critical path continues to run through Contract C0311 C1610 (Trackwork Installation), B620 (Automatic Train Control), B645 (SCADA) and Testing/Pre-Revenue Operations.

EMC COST PERFORMANCE



EMC COST PERFORMANCE ANALYSIS

- Final Design is approximately 90% complete, with all of the Major Facilities (Stations and Tunnels) at 100% complete. The Cost Performance Index is expected to remain essentially unchanged.
- The MTA has calculated a Forecast at Completion of \$82.3M, not including the cost of work to be transferred from Segment 2 to Segment 3 for B251-related design activities. This represents staff's efforts to contain costs which is lower than EMC's forecast.
- The MTA is working with the EMC to reduce the overall cost forecast by as much as 15% as the project moves fully into construction and requires only limited design services during construction.

**METRO RED LINE - Segment 3 North Hollywood
Summary Status Report
Period Ending - May 31, 1996**



CONSTRUCTION SAFETY STATISTICS

Project-to-Date Rates

		<u>Change from Last Month</u>	
Recordable Injury Rate			
1994 National Average	11.8		
Project Rate	12.5	-0.5	
Lost Time Rate (Frequency)			
1994 National Average	4.9		
Project Rate	0.2	-0.1	
Lost Work Days (Severity)			
1991 National Average	148.1		
Project Rate	16.2	-1.3	

- Segment 3 North Hollywood is incurring over 125,000 work hours per month.

(Based on April statistics)

CONSTRUCTION SAFETY SUMMARY

- Since November 1995, Segment 3 North Hollywood has completed over 735,000 work hours without a Lost Time Injury.
- Contract C0331 (North Hollywood Tunnel) is approaching completion of tunnel excavation without a single Lost Time Injury.
- To date, the project has completed over 1,650,000 work hours with two Lost Time Injuries.

AREAS OF CONCERN

ONGOING

Item (Date initiated: April 1996)
**Contract C0331 (North Hollywood Tunnel)
 Underground Easements**

Concern/Impact
 Outstanding real estate parcels at the southern end of the contract may delay mining operations.

Status/Action
 Two out of the three parcels are public agency-owned properties and timing is of concern. The third parcel is privately owned and is the subject of high level negotiations and may have to be purchased by emergency condemnation.

**METRO RED LINE - Segment 3 North Hollywood
Summary Status Report
Period Ending - May 31, 1996**



AREAS OF CONCERN

ONGOING

Item (Date initiated: February 1996)

Contract C0311 (Line Section from Universal City Station to Station 630+00)

Project Impacts Due to Implementation of MTA Board Motion Dated January 24, 1996 Regarding Tunneling Under the Santa Monica Mountains

Concern/Impact

Implementation of MTA Board Motion to adopt mitigation measures will likely impact overall project schedule and budget. Measures instituted by the Board include reducing the amount and intensity of blasting, increasing tunnel grouting to prevent surface springs leaking into the tunnel, and monitoring tunneling effects on surrounding public and private property ecosystems.

Status/Action

MTA has directed its construction manager, JMA, and its designer, EMC, to conduct a comprehensive study considering safety, technical, logistical, cost and schedule impacts and issues as a result of implementing the MTA Board's Motion. The study has been completed and is under review. A number of near-term activities outlined in this study are being pursued through a series of change notices to Contract C0311, additional work orders to Parsons Engineering Services (PES), and increased insurance coverage. Longer-term activities to resolve this issue are being developed.

AREAS OF CONCERN

ONGOING

Item (Date initiated: February 1995)

Contract C0331 (Line Section North Hollywood to Universal City)

Lack of Progress

Concern/Impact

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 progresses in a manner that ensures against ground settlement. This includes a grouting program which has been implemented allowing for resumption of excavation activities.

Contractor completed 2,639 lf of mining in the two tunnels this month for an average of approximately 55 lf per working day. Mining is forecast to be complete in July.

Review of mitigation measures continue with the post excavation intent of improving forecast completion of interim milestones and contract completion. These measures are aimed at reducing adverse schedule/cost impacts to C0351 related to access. Measures planned include concurrent cross passages and invert work and also the use of longer forms.

**METRO RED LINE - Segment 3 North Hollywood
Summary Status Report
Period Ending - May 31, 1996**



AREAS OF CONCERN

ONGOING

Item (Date initiated: February 1995)

**Contract C0351 (North Hollywood Station with Crossover and Tailtrack)
Access to Crossover Area**

Concern/Impact

The C0331 contractor must complete mining operations to allow C0351 access to the crossover area.

Status/Action

C0331 (North Hollywood Tunnel) and C0351 contract teams are currently analyzing the issues and solutions involved with this delay. These solutions include the delayed turnover of the northern portion of the crossover by C0351 with re-sequencing of activities focused on mitigating delays to the station.

METRO RED LINE SEGMENT 3

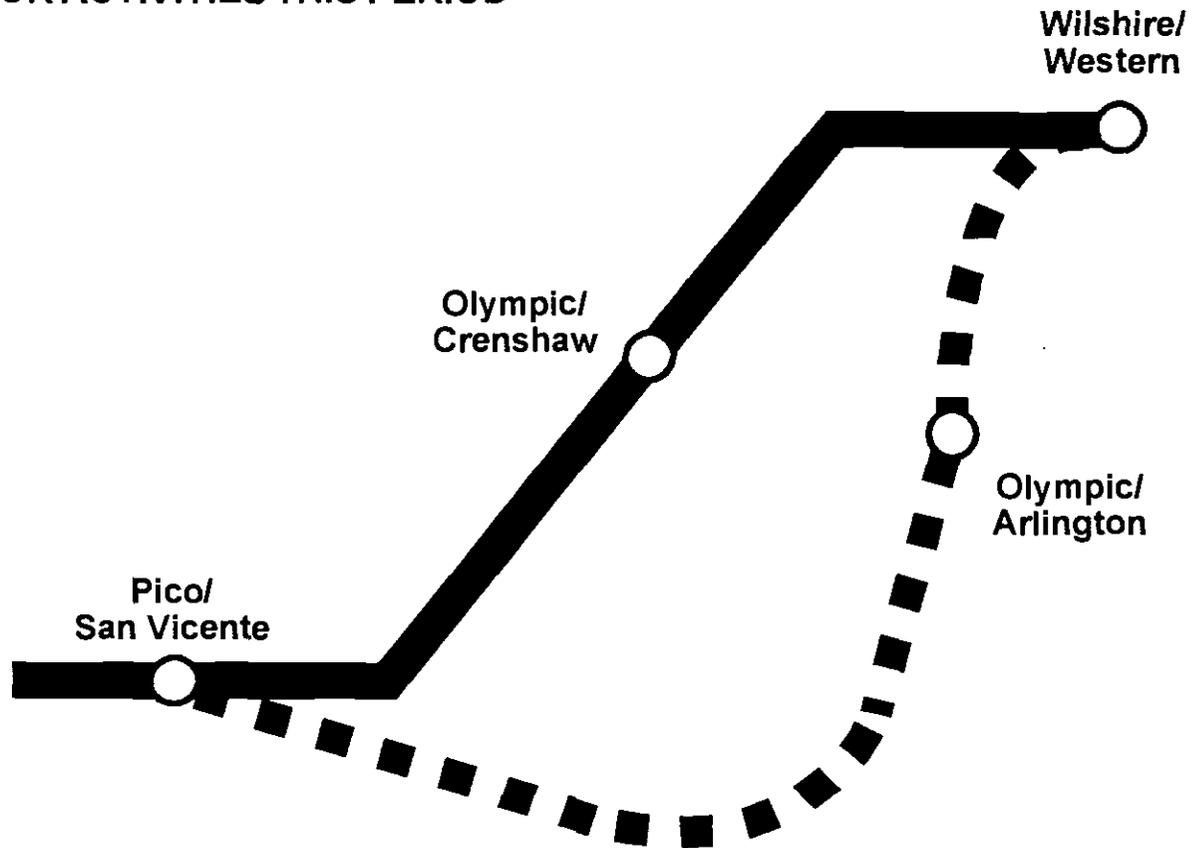
MID-CITY EXTENSION

EXECUTIVE SUMMARY

METRO RED LINE - Segment 3 / Mid-City Extension
Summary Status Report
Period Ending - May 31, 1996



MAJOR ACTIVITIES THIS PERIOD



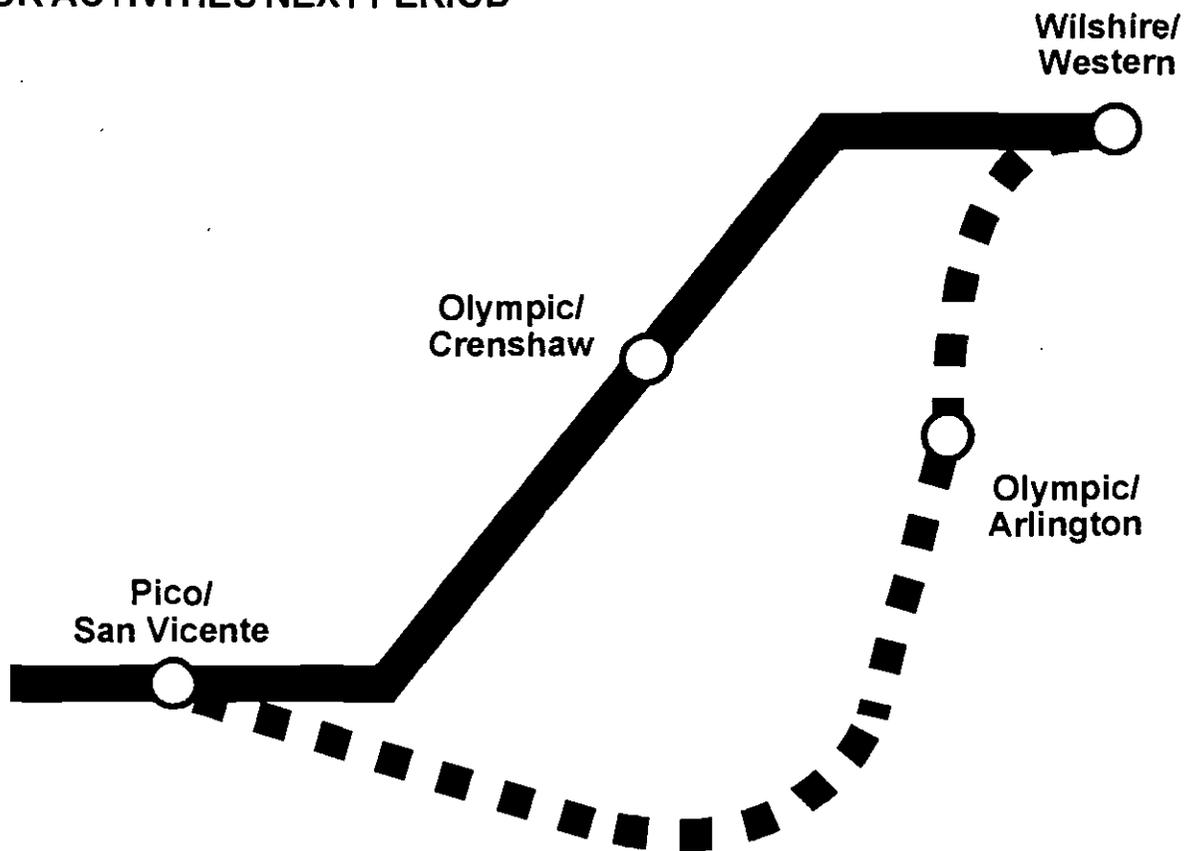
SYSTEMWIDE ACTIVITIES

- MTA provided EMC Notice to Proceed to begin the engineering feasibility study for a deep bored alignment along Wilton Place/Arlington Avenue.
- Enviro-Rail was authorized to proceed with six additional probes and three wells to supplement existing subsurface data for the new alignment.
- EMC has been developing profile and plan drawings, and compiling and mapping utility data.
- The MTA/EMC working group began compiling a list of issues to be reviewed by a Tunnel Review Board in June.

METRO RED LINE - Segment 3 / Mid-City Extension
Summary Status Report
Period Ending - May 31, 1996



MAJOR ACTIVITIES NEXT PERIOD



SYSTEMWIDE ACTIVITIES

- EMC will continue preparation of plan and profile drawings, commence the right-of-way study, complete alignment maps, and complete and submit the utility study.
- Enviro-Rail will submit boring logs and gas data, and will install gas wells, complete, and submit the gas wells report.
- The first of two Tunnel Review Board meetings will convene June 17-18.
- MTA Program Control and Contracts have identified current obligations for specific items (professional services, owner's insurance, hazardous materials handling, etc.) that can be deferred until a new alignment is selected. A plan to defer these items will be submitted to the MTA Board for approval at the June 1996 Board meeting.

METRO RED LINE - Segment 3 / Mid-City Extension
Summary Status Report
Period Ending - May 31, 1996



BUDGET

	<u>Amount</u> <u>(In \$ mil)</u>	<u>Change from</u> <u>Last Month</u> <u>(In \$ mil)</u>
Original Budget	490.7	None
Approved Budget	490.7	None
Current Forecast	TBD	TBD
Expenditures	N/A	N/A

BUDGET ANALYSIS

- Budget and Forecast values are subject to outcome of alignment alternative selected.
- Due to the implementation of the new Financial Information System (FIS), actual expenditure data for May will not be available. The expenditure module for FIS is expected to be fully implemented by the June PMSR.

SCHEDULE

		<u>Change from</u> <u>Last Month</u>
Current ROD	7/16/99	None
Design Progress	0%	None
Construction Progress	0%	None
Critical Path Float	N/A	None

SCHEDULE ANALYSIS

- The engineering feasibility study for the Wilton/Arlington alignment began May 3 and is on schedule to complete by mid-August 1996.
- If the alignment and configuration prove feasible, a SEIS/SEIR will be prepared.
- This will lead to an FTA Record of Decision, scheduled for March 1998, and the subsequent resumption of final design.

CONSTRUCTION SAFETY

- No activity for this period.

AREAS OF CONCERN

- NEW

None

- ONGOING

Item

Procurement Contracts (initiated 11/95)

Concern/Impact

Pending redefinition of the Mid-City configuration and alignment, MTA needs to review contract commitment values and deobligate/defer as appropriate.

continued on page ES-4

METRO RED LINE - Segment 3 / Mid-City Extension
Summary Status Report
Period Ending - May 31, 1996



AREAS OF CONCERN - continued

Item

Procurement Contracts (initiated 11/95) - continued

Status/Action

The MTA Board, at its April 24, 1996 meeting, authorized transfer of \$17,000,000 in Mid-City procurement commitments and appropriate expenditures to the East Side Extension. The deferral of the remaining balance of Mid-City obligations for Hazardous Material Handling, Owner's Insurance, etc. is under review and is presently scheduled to go to the MTA Board for approval in June 1996.

Item

Mid-City Master Schedule (initiated 8/95)

Concern/Impact

The Draft SEIS/SEIR when completed will define the project alternatives. The MTA Board will be able to make a decision on the preferred alternative for the Final SEIS/SEIR. The overall schedule for final design and construction is on hold pending the MTA Board determination of the preferred alternative. The impact to R.O.D. cannot be finalized until the preferred alternative is selected.

Status/Action

The SEIS/SEIR document preparation has slipped, and will slip further now that the third alternative has been authorized for study. See SD-1 for discussion.

● **RESOLVED**

None

METRO RED LINE SEGMENT 3

EAST SIDE EXTENSION

EXECUTIVE SUMMARY

METRO RED LINE - Segment 3 East Side Extension

Summary Status Report

Period ending - May 31, 1996



MAJOR ACTIVITIES THIS PERIOD

C0502

LITTLE TOKYO/ARTS DISTRICT STATION AND LINE SEGMENT FROM UNION STATION TO FIRST/BOYLE

SECTION DESIGNER PRESENTED CONCEPTUAL STATION DESIGN TO THE REVIEW ADVISORY COMMITTEE (RAC) ON MAY 7, TO THE MTA/EMC SENIOR STAFF ON MAY 13, TO THE MTA REAL ESTATE & JOINT DEVELOPMENT COMMITTEE ON MAY 15, AND TO THE MTA CONSTRUCTION COMMITTEE ON MAY 16, 1996. SITE SURVEYS AND UTILITY POTHOLING COMPLETED AT THE STATION LOCATION. EMC COMPLETED NEGOTIATION OF SECTION DESIGNER'S PROPOSAL FOR METRO ART INTERFACE AND ISSUED NTP.

C0521

FIRST/BOYLE STATION

SECTION DESIGNER WAS ISSUED A LIMITED NOTICE TO PROCEED ON MAY 20, 1996. KICKOFF MEETING WITH SECTION DESIGNER, EMC AND MTA WAS HELD ON MAY 21, 1996. DESIGN QUALITY WORKSHOP WAS HELD WITH SECTION DESIGNER AND SUBCONSULTANTS ON MAY 28, 1996. ARTIST AND ARCHITECT KICKOFF MEETING WAS HELD MAY 28, 1996. SECTION DESIGNER WAS PROVIDED WITH RFP FOR DESIGN WORK ASSOCIATED WITH INTERFACE WITH ARTIST. EMC TEAM STARTED FINAL DESIGN OF THE STATION ON MAY 13, 1996.

C0531

CHAVEZ/SOTO STATION

TWO FULL-TAKE PARCELS WERE CERTIFIED AND ONE PARCEL WAS CERTIFIED AND DECERTIFIED. EMC RECEIVED FINAL GEOTECHNICAL REPORTS FOR THE STATION AND ADJACENT TUNNELS ON MAY 31, 1996.

C0551

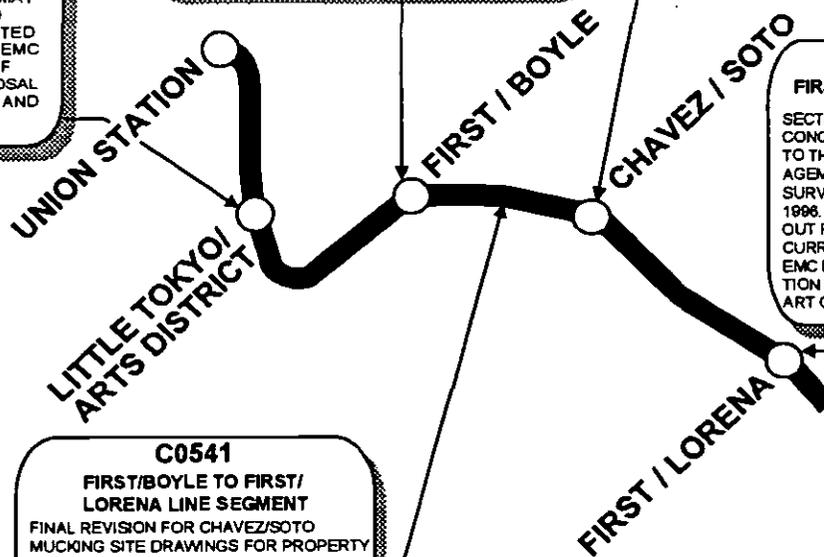
FIRST/LORENA STATION

SECTION DESIGNER PRESENTED CONCEPTUAL STATION DESIGN TO THE MTA/EMC SENIOR MANAGEMENT ON MAY 29, 1996. FIELD SURVEY COMPLETED ON MAY 16, 1996. SIDEWALK AND STREET LAYOUT FINALIZED WITH MTA CONCURRENCE ON MAY 21, 1996. EMC ISSUED NTP TO THE SECTION DESIGNER FOR THE METRO ART ON MAY 8, 1996.

C0541

FIRST/BOYLE TO FIRST/LORENA LINE SEGMENT

FINAL REVISION FOR CHAVEZ/SOTO MUCKING SITE DRAWINGS FOR PROPERTY CERTIFICATION. CONTINUED STRUCTURAL CALCULATIONS FOR CROSS-PASSAGES AND 75 FT. CUT & COVER AT CHAVEZ/SOTO STATION. CONTINUED DETAIL DRAWINGS FOR THE TUNNEL PRECAST IN PLACE LINER.



SYSTEMWIDE ACTIVITIES

AMENDMENT #4 EXTENDING FINAL DESIGN SERVICES THROUGH JULY 15, 1996 WAS RECEIVED ON MAY 13, 1996 BY EMC. EMC ISSUED ON MAY 3, 1996 REVISION #3 SCOPE OF SERVICES FOR THE FINAL DESIGN PROJECT IMPLEMENTATION PLAN (PIP) TO MTA. MTA ISSUED A SCHEDULE FOR NEGOTIATING THAT PIP ON MAY 30, 1996. EMC ISSUED INTERIM DESIGN SUBMITTAL FOR CONTRACT C0538 AND CONTRACT C0558 PRE-FINAL DESIGN SUBMITTAL. MTA CONCURRED APPENDAGE LOCATIONS FOR CONTRACTS C0502 AND C0551. SECTION DESIGNERS FOR CONTRACT C0502 AND C0551 ISSUED THEIR PROPOSED QUALITY CONTROL PLANS AND CRITERIA CONFORMANCE CHECKLIST.

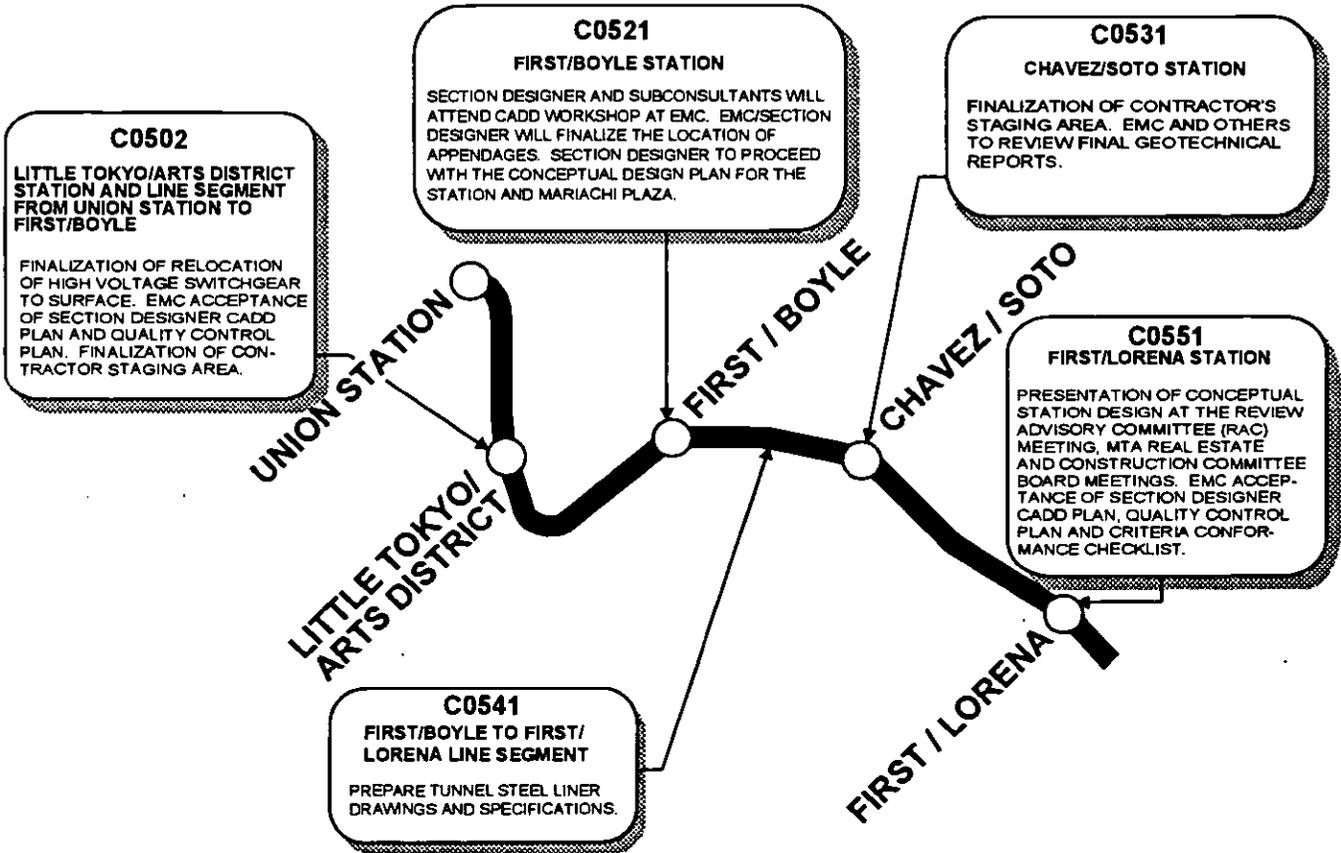
METRO RED LINE - Segment 3 East Side Extension

Summary Status Report

Period ending - May 31, 1996



ACTIVITIES PLANNED FOR NEXT PERIOD



SYSTEMWIDE ACTIVITIES

EMC/MTA TO BEGIN NEGOTIATIONS OF FINAL DESIGN SCOPE OF SERVICES, ASSOCIATED COSTS AND SCHEDULE ON JUNE 3, 1996 AND FINALIZE NEGOTIATIONS BY JUNE 19, 1996. EMC/MTA TO COMPLETE LIST OF PARCELS TO BE CERTIFIED. EMC TO CERTIFY 13 FULL-TAKE AND 2 PART-TAKE PARCELS FOR CONTRACT C0551 AND 30 SUB-SURFACE EASEMENTS FOR CONTRACT C0541 WHICH IS ON THE CRITICAL PATH.

METRO RED LINE - Segment 3 East Side
Summary Status Report
Period Ending - May 31, 1996



BUDGET

	<u>Amount (in \$ mil)</u>	<u>Change from Last Month (in \$ mil)</u>
Original Budget	979.6	None
Approved Budget	979.6	None
Current Forecast	988.1	0

BUDGET ANALYSIS

- During the reporting period, no changes were made to the budget or the forecast.
- The following cost mitigation measures are under review. Each have an estimated cost savings range of \$2 to \$4 million:
 - Revised Power Distribution System
 - Floating Slab reduction
 - Deletion of Under Platform Exhaust (UPE) fans
- Due to the implementation of the new Financial Information System (FIS), actual expenditure data for March and April is not available. The expenditure module for FIS is expected to be fully implemented by June Project Manager's Status Report (PMSR).

CONTRACT CHANGES

- No activity for this period.

CONTRACT CHANGE ANALYSIS

- No activity for this period.

METRO RED LINE - Segment 3 East Side
Summary Status Report
Period Ending - May 31, 1996



SCHEDULE

		<u>Change from Last Month</u>
Current R.O.D.	Nov 2002	None
Final Design progress	19.7%	3.1%
Construct. Progress	N/A	N/A
Critical Path Float	-319	0

SCHEDULE ANALYSIS

- The forecast R.O.D. is September 2003, or 319 calendar days (228 working days) behind the FFGA scheduled R.O.D. of November 2002 due to delay in full release of Final Design and the delay in the section designer's Notice to Proceed.

Complete recovery of the full 319 days presently seems unlikely, until the award of the Construction Management (CM) contract. At which time the CM will be able to begin their constructability reviews which could result in a recovery.

- Schedule mitigation measures being evaluated include:
 - Construction/design activity resequencing
 - Simplified contractor interfaces
 - Possible second tunnel concreting crew
 - Possible second fiber optics crew
- Potential mitigations may be negatively offset by changes in tunnel boring technology, continuing identification of additional real estate requirements, etc.
- A complete review by MTA of the Design and Project Schedules is underway. Interim results were concluded by MTA. Formal results are forecasted for June. Finalizing the Final Design negotiations during June will produce a Final Design Baseline Schedule from which accurate performance measurement can be measured.

**EMC
 COST PERFORMANCE**

Cost Performance Chart is not applicable at this time but will be provided at the time a baseline schedule is approved, which is expected next month.

**EMC
 COST PERFORMANCE ANALYSIS**

The Cost Performance Index baseline is no longer consistent with the original \$48.5M budget due to authorized scope changes incorporated into the work in progress. The revised scope of work is documented in the revised Project Implementation Plan as submitted by the EMC on May 3, 1996, which will be negotiated and finalized in June, 1996. Once this is achieved, the revised baseline will be established and a Cost Performance Chart which accurately reflects the work scope will be included.

METRO RED LINE - Segment 3 East Side

Summary Status Report

Period Ending - May 31, 1996



AREAS OF CONCERN

ONGOING

Item [Initiated February 1996]

Project escalation costs due to delayed starts.

Concern/Impact

Stemming directly from the delay in the full release of final design services and the Section Designers' Notice-To-Proceed, the project schedule has been delayed 319 calendar days (228 working days) from the approved FFGA schedule, incurring a \$44 million escalation cost.

Status/Action

The \$44 million escalation cost has been partially mitigated by a previously identified \$15 million value engineering cost savings. The MTA Board's decision to delete the air conditioning system at the stations and to procure sixteen passenger vehicles instead of twenty-four has resulted in an additional cost savings of \$20.9 million. The MTA/EMC is continuing evaluating mitigation measures including, revisions to the power distribution system, and ground borne noise and vibration mitigation study to reduce floating slab, and deletion of the Under Platform Exhaust (UPE) fans. While some mitigation work has been accomplished, EMC and MTA project staff are continuing to identify, analyze and implement further corrective actions.

ONGOING

Item [Initiated April 1996]

Contract C0551 15 (13 full-takes and 2 part-takes) additional property acquisitions.

Concern/Impact

Assuming 14 months acquisition for each parcel, contract C0551 will be impacted by 71 working days. This impact results in the C0551 contract becoming part of the critical path.

Status/Action

MTA Real Estate is formalizing property acquisition schedule with their plan and determining if acquisition of each parcel can be less than the assumed 14 months.

METRO RED LINE - Segment 3 East Side
Summary Status Report
Period Ending - May 31, 1996



AREAS OF CONCERN (Continued)

ONGOING

Item [Initiated February 1996]

MTA requested EMC to study alternative methods of tunneling for the East Side Extension.

Concern/Impact

Minimize settlement along the East Side alignment.

Status/Action

During the on-going discussions with the MTA and the Dr. Eisenstein panel, EMC has been directed to proceed with the design using closed face tunnel boring machines for the East Side Extension project. EMC is proceeding with the evaluation of both Earth Pressure Balance (EPB) and Slurry Shield machine to meet this requirement.

ONGOING

Item [Initiated February 1996]

Revised Baseline documents including scope of services and schedule.

Concern/Impact

Due to changes in work scope that have been incorporated into the work in progress, the previous design status baseline is no longer valid. The baseline is used as the basis for measuring design progress and performance measurement and without one, accurate performance measurement is unable to be performed and reported.

Status/Action

Negotiations of the May 3, 1996 PIP scope of services and corresponding costs and schedule is expected to be finalized in June. All documents, including the Final Design schedule, will then be baselined.

**METRO RED LINE - Segment 3 East Side
Summary Status Report
Period Ending - May 31, 1996**



AREAS OF CONCERN (Continued)

ONGOING

Item [Initiated February 1996]

Coyote Pass Fault within East Side Extension alignment.

Concern/Impact

Study of the Coyote Pass Fault shows the East Side Extension alignment crosses the fault at three places. Study is needed to determine whether enhanced structural and tunnel design is required to mitigate the risk at fault crossings. Cost impacts range from zero to substantial (\$10 million).

Status/Action

As a result of discussions with the Dr. Eisenstein panel, one recommendation was the use of steel tunnel liners at the fault crossings to mitigate the Maximum Design Earthquake.

VEHICLE ACQUISITION PROJECT

EXECUTIVE SUMMARY

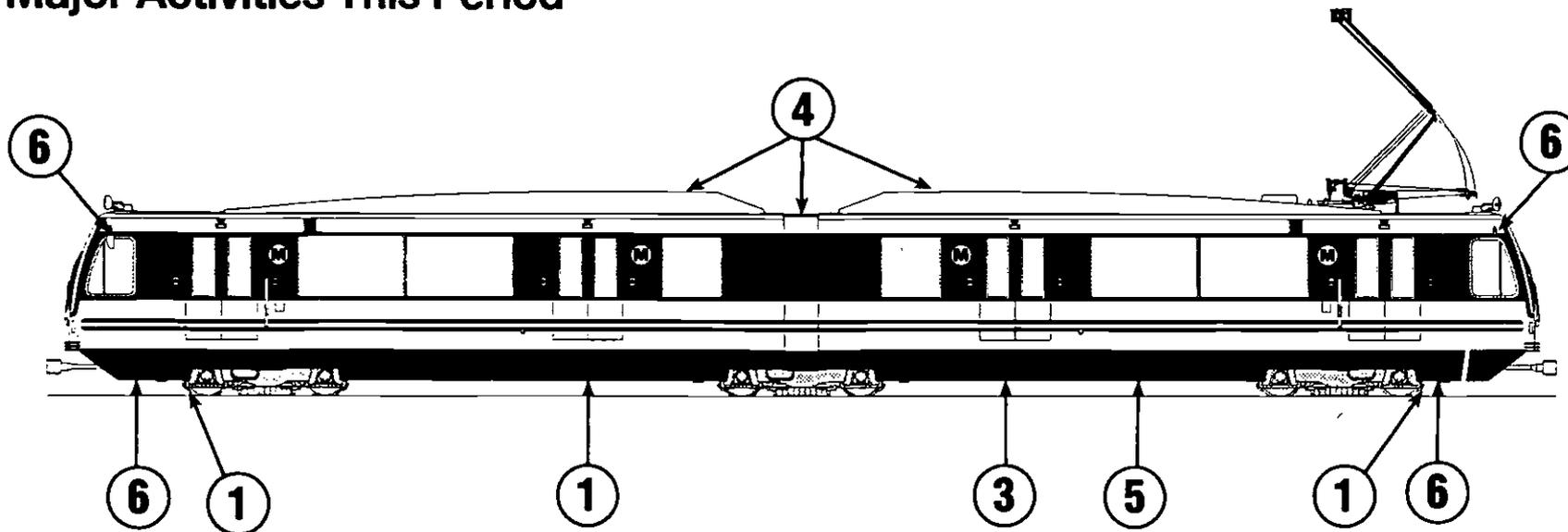
L.A. Light Rail Vehicle

Summary Status Report

Period Ending - May 31, 1996



Major Activities This Period



1. Conducted First Article Inspection (FAI) and Design Conformance Testing of the Auxiliary Power Supply/Low Voltage Power Supply and Battery Charger. Also completed FAI of Sandbox.
2. Conducted audit of Siemens regarding their Termination Cost Claim and participated in a Quality Assurance System Audit of the Carson Carshell facility.
3. Conducted preliminary FAI of car underframe equipment installation.
4. Conducted design review of HVAC Unit and Electro Magnetic Interference (EMI) Detector.
5. Completed Floor Fire Test to demonstrate 1 hour fire rating.
6. Witnessed test of the Horn and Between Car Warning Device (ADA required).
7. Vehicle components design and manufacturing of parts, including the first car shell, progressed.

ES-1

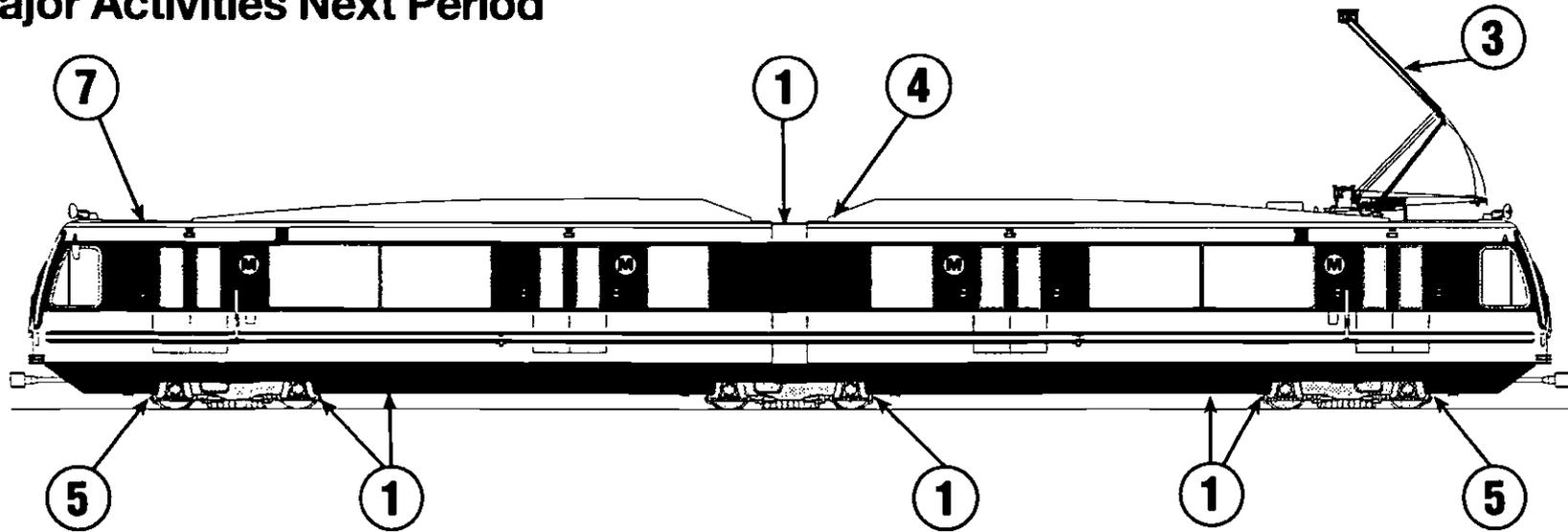
L.A. Light Rail Vehicle

Summary Status Report

Period Ending - May 31, 1996



Major Activities Next Period



1. Conduct Systems Integration Test (Propulsion, Brakes and ATC equipment) in late-June or early July.
2. Conduct Blue Line Vehicle Compatibility Test for Communication System.
3. Conduct Pantograph FAI and Design Conformance Test.
4. Conduct Communication System Pre-FAI and Design Conformance Test.
5. Start New Life Cycle Test on the Power Truck Frame.
6. Meet with TRW/Aerojet regarding Product "C" Air Conditioning Product contract close out.
7. Conduct First Complete Carshell Inspection.

ES-2

L.A. LIGHT RAIL VEHICLE

Summary Status Report

Period ending - May 31, 1996



BUDGET

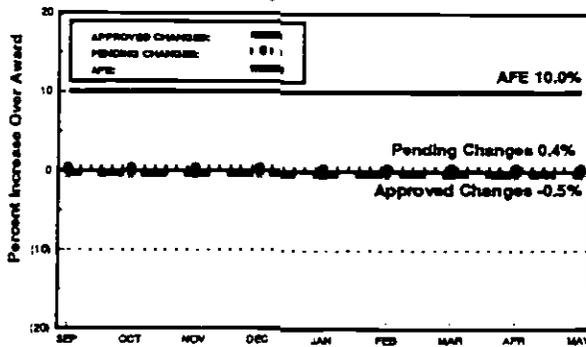
	Amount (in \$ mil)	Change from Last Month (in \$ mil)
Original Budget	257.6	-0-
Approved Budget	257.6	-0-
Current Forecast	201.4	-0-

BUDGET ANALYSIS

- Car reduction effected 9/08/95 which will reduce contract value from \$215 million to approximately \$170 million after termination liability is negotiated (2-4 months from now).
- The current forecast includes the reduction of both procurement contract value and other project costs.
- Due to the implementation of the new Financial Information System (FIS), actual expenditure data for May will not be available. The expenditure module for FIS is expected to be fully implemented by the June Project Manager's Status Report (PMSR).

CONTRACT CHANGES

Construction/Procurement Contracts
Contract Changes
as % of Original Contract Award



CONTRACT CHANGE ANALYSIS

The figures for May 1996 are as follows:

Approved Changes	(0.5%)
Pending Changes	0.04%
AFE	10%

SCHEDULE

		Change from Last Month
Schedule Car Delivery		
1st Car	July 1997	+17 Days
52nd Car	Nov. 1998	+13 Days
Design Progress	90-95% complete	N/C
Fabrication Progress	25-30% complete	N/C
Critical Path	Carshell delivery	N/C
Delay (1st Car)	-8 months	+17 Days
Data Date	May 1, 1996	

SCHEDULE ANALYSIS

The Contractor's last forecast schedule reflected a total of eight months delay in 1st car deliveries. Other subsystems with potential impact on delivery are air conditioning, doors and communications equipment. Carshell delivery is still on the critical path. Acceleration of the delivery schedule for the first several carshells is unlikely, however, the delivery schedule is projected to improve for later units.

In recent schedules, STS assumed that the MTA can accept cars at a higher rate than specified (2 cars per month).



AREAS OF CONCERN

ONGOING

Item (Date Initiated March 1996)

Failure of Power Truck Friction Support Brackets

Concern/Impact

Duewag completed their re-design of the friction brake brackets.

Status/Action

LTK is presently performing a review of the stress analysis. Testing on the new bracket structures is anticipated to begin next month.

Item (Date Initiated March 1996)

Failure to Press Disc Brake Hubs onto Axle at the Design Force

Concern/Impact

STS/WABCO/Penn Machine modified the center disc-axle pressing tolerance to include tonnages evidenced during the First Article (and subsequent) Inspections. In response to our query as to why an inappropriate tonnage was initially used, WABCO replied that their disc vendor, the German Company BSI, recommended the original pressing tonnage based on a class of discs of similar design, and a standard lubricant with an assumed coefficient of friction. The disc used for the L.A. Standard Car has a bore slightly *smaller* than the standard bore for the given hub outer diameter. Additionally, the use of a lubricant with a coefficient of friction slightly higher than that assumed resulted in a higher pressing force than anticipated.

Status/Action

This issue is now considered closed.

Item (Date Initiated February 1996)

Pneumatic Emergency Brake Application-Time Too Long

Concern/Impact

By changing internal port sizes, WABCO was able to improve response times to acceptable levels.

Status/Action

This issue is now considered closed.



AREAS OF CONCERN (CON'T)

Item (Date Initiated February 1996)

Schedule Slippage

Concern/Impact

The vehicle delivery schedule slipped by several weeks, due to the completion and shipment of the first carshell to the STS Sacramento assembly plant, scheduled for June 28, 1996.

Status/Action

Awaiting STS June 1, 1996 Program Schedule.

Item (Date Initiated July 1995)

Cancellation of 22 Standard Cars

Concern/Impact

The MTA is continuing their review of the STS claim. The MTA audited STS books and records in Sacramento.

Status/Action

The MTA will review audit results upon receipt of additional information requested from STS.

Item (Date Initiated March 1995)

HVAC Design

Concern/Impact

In May, 1996, LTK traveled to Lamar, Colorado, to inspect Suttrak's prototype HVAC unit. The unit was satisfactory, with only minor changes required. Two potential problem areas remain, the volume of fresh air, which must be demonstrated to be adequate, and the distribution of the combined fresh and return air, which presently appears centered on the evaporator coil rather than distributed evenly across it.

Status/Action

Design Conformance Testing is scheduled for mid-July. This issue will remain an item of concern until system validation.



AREAS OF CONCERN (CON'T)

Item (Date Initiated November 1995)

Carborne Signal Equipment for 16 Standard Cars

Concern/Impact

Upon review of MTA's requirement with regard to allocation of various vehicles to three light rail lines, 16 remaining non-Metro Green Line LA cars will operate in Metro Blue Line environment. MTA must procure signal equipment compatible with Metro Blue Line signal system in order to operate their Metro Blue Line cars.

Status/Action

Awaiting response from STS regarding their willingness to supply 16 carsets of Metro Blue Line signal equipment. STS has been urged by MTA to expedite their response.