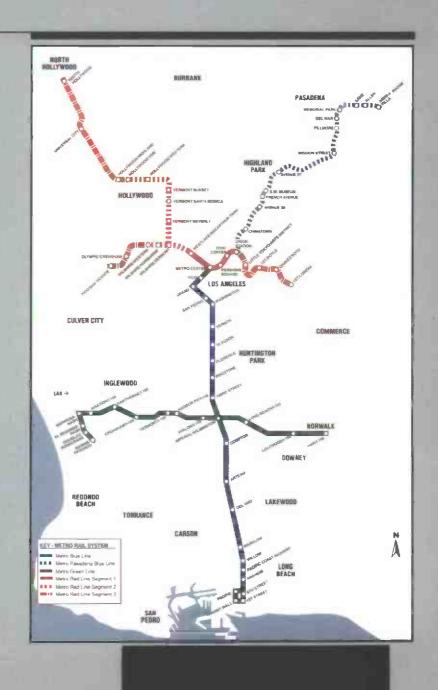
MTA METRO CONSTRUCTION

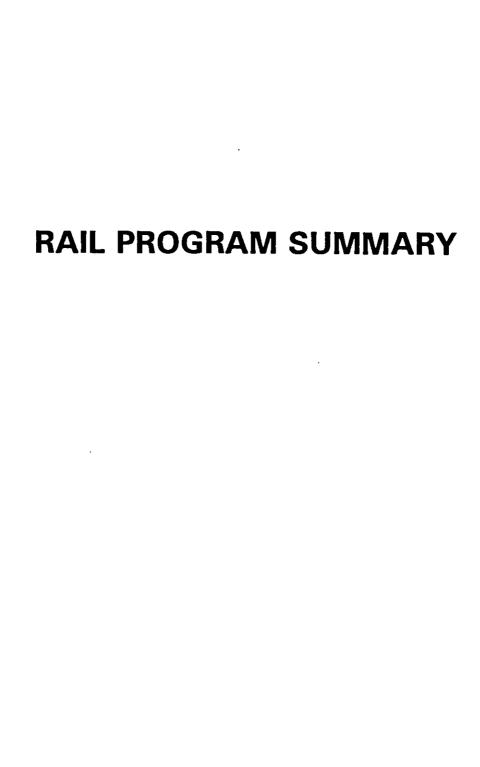


Executive Report
Rail Program Status



RAIL PROGRAM STATUS SUMMARY

THE LOS ANGELES COUNTY
METROPOLITAN TRANSPORTATION AUTHORITY
METRO CONSTRUCTION DIVISION



Cost Status

Current Budget \$803,868,000

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

Schedule Status

Current Plan May 2001

Design Progress

Construction Progress

Plan Actual 100.0%

11.7% 8.8%

 The construction variance is due to delays in finalizing work scope and delays in the start of final design.

Safety Statue

Project Rate 0.0

National Average

0.0 0.0 4.9 148.1

Lost Work Days

• The project is incurring 16,000 work hours per month with no Lost Time Injuries.

Areas of Concern

Validation of \$803.9 baseline estimates.

Monthly Highlights

- MTA worked closely with community representatives on project work scope changes.
- Continued reviewing CWO 41 estimated costs for final design.
- Completed negotiations of CWO 40 estimated costs for final design services.

METRO RED LINE SEGMENT 2

Cost Status

Current Budget

\$1,640,000

• There was no change to the Current Budget during the period.

Schedule Status

Design Progress

Construction Progress

Plan Actual 93.1% 94.6% 89.5% 82.0%

Wilshire Corridor - Revenue operations - July 13, 1996

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

2.5

4.9

Lost Work Days

69.1

148.1

• The project completed 149,000 work hours with no Lost Time Injuries.

Areas of Concern

Vermont/Sunset Station (B261) interim and final milestone completion.

Monthly Highlights

- 8610 Trackwork Contractor began a survey of Vermont tunnels.
- Continued negotiations with 8620 Automatic Train Control installaton contractor for completion of work according to the Vermont/Hollywood Corridor recovery plan.
- Schedule mitigation efforts continue on critical path contracts to maintain schedule objectives.

METRO RED LINE SEGMENT 3 NORTH HOLLYWOOD EXTENSION

Cost Status

Current Budget

\$1,313,848,000

The were no changes to the Current Budget during the period.

Schedule Status

Design Progress

Construction Progress

Current Plan May 2000

94.6% 93.5% Actual

67.7% 33.0%

• Contract C0311 Line Section from Universal City Station to Station 630+00 and C0301 Hollywood/Highland Station continues to be behind schedule.

Plan

Safety Status

Project Rate

National Average

Lost Time Rate

0.4

4.9

Lost Work Days

19.6

148.1

• The project is incurring 120,000 work hours per month.

 Mitigation efforts incorporated into the project schedule to maintain the May 2000 ROD do not include allowances for contingency.

Monthly Highlights

- Schedule mitigation options for C0311 were identified and are under review.
- Began the design and review of station lift drawings for H0648 Communication Installation.
- · A risk analysis on the TBM excavation is under development to better forecast completion.

METRO RED LINE SEGMENT 3 MID-CITY EXTENSION

Cost Status

Current Budget

\$490,663,000

• The Current Budget value is contingent on the preferred alternative selected.

Schedule Status

Plan

Design Progress 0%

Construction Progress

Current Plan TBD

0%

Actual

0%

0%

Safety Status Lost Time Rate Project Rate N/A

National Average 4.9

Lost Work Days

N/A

148.1

No Construction Safety activity for this period.

Areas of Concern

 The Mid-City Project cost and schedule baseline cannot be finalized until an alignment alternative is selected.

Monthly Highlights

- · EMC continued work on a site plan feasibility study addressing interfaces between an expanded bus terminal and two new station options at Pico/San Vicente.
- Ultrasystems Environmental, Inc., began preparation of the draft SEIS/SEIR incorporating the Wilton/Arlington alignment alternatives.

METRO RED SEGMENT 3 EAST SIDE EXTENSION

Cost Status

Current Budget \$979,601,000

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

Schedule Status Design Progress Construction Progress

Current Plan November 2002 Plan 57.4 0.0% Actual 51.5% 0.0%

The plan reflects the Design Baseline Schedule approved by the MTA in October 1996.

Safety Status Project Rate National Average
Lost Time Rate N/A 4.9
Lost Work Days N/A 148.1

• No Construction Safety activity for this period.

Areas of Concern

Contract C0502 design is on the critical path due to a slippage in the camera ready submittal.

Monthly Highlights

- Amendment 8 for the continuation of final design services was submitted to the MTA.
- Schedule mitigation measures under evaluation include: Construction/design activity resequencing, simplified contractor interfaces, and a second fiber optics crew.
- The project schedule was turned over to the PMA for maintenance and incorporation.

VEHICLE ACQUISITION PROJECT

Cost Status

Current Budget \$257,597,000

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

Schedule Status Design Progress Fabrication Progress

Schedule Car Delivery

1st Car February 1998 90% 30%

52nd Car June 1999

• The schedule from the contractor reflects 16 months delay in first car deliveries due to design and manufacturing problems.

Areas of Concern

· Lack of progress in the development of manuals and training.

Monthly Highlights

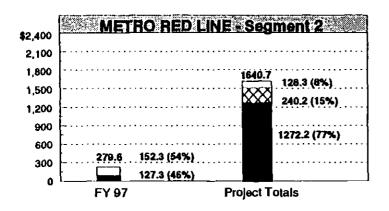
- · A third carshell was shipped from Carson to Sacramento for final assembly.
- Met with HVAC and seat suppliers to discuss delays and review corrective action plans.
- Attended Communications Systems First Article Inspection (FAI) in Hornell, New York.

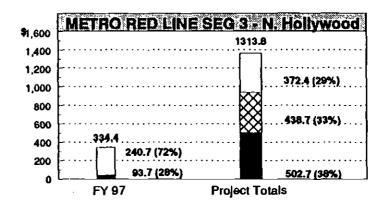
METROPOLITAN TRANSPORTATION AUTHORITY PROJECT COST REPORT - TOTAL RAIL PROGRAM SUMMARY BY COST ELEMENT (IN THOUSANDS)

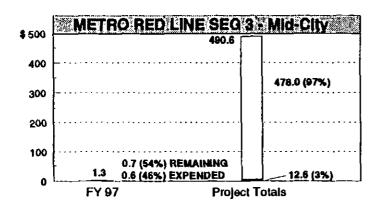
				(IN THOU	SANUS)			
PROJECT: TOTAL RAIL PROGRA	W						STATUS DATE:	12/27/96
ELEMENT	BUD	<u>GE</u> T	COMMIT	MENTS	EXPEND	TURES_	CURRENT	VARIANCE
DESCRIPTION	ORIGINAL	CURRENT	PERIOD	TO DATE	PERIOD	TO DATE	FORECAST	(7-2)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CONSTRUCTION	5,153,507	5,335,102	3,039	3,723,325	36,282	2,896,096	5,317,886	(17,216)
PROFESSIONAL SERVICES	1,685,529	2,098,135	(10,383)	1,615,683	15,336	1,453,361	2,153,538	55,403
REAL ESTATE	480,002	540,649	3,662	414,278	3,749	412,640	540,316	(333)
UTILITY/AGENCY	146,279	167,646	(23)	141,145	1,157	113,034	170,387	2,741
FORCE ACCOUNTS		į	{				l	
SPECIAL PROGRAMS	11,045	16,748	6	5,894	(10)	4,852	15,709	(1,039)
CONTINGENCY	560,120	342,325	0	٥	o	0	272,680	(69,645)
PROJECT REVENUE	(18,115)	(37,411)	o	(2,824)	٥	(11,310)	(33,163)	4,248
PROJECT GRAND TOTAL	8,018,367	8,463,194	(3,699)	5,897,501	56,514	4,868,673	8,437,353	(25,841)

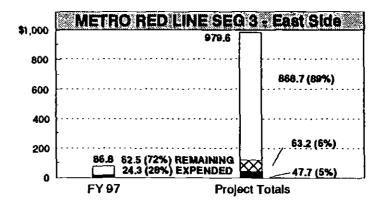
NEW REQUIREMENTS	BUDO	3ET	COMMIT	MENTS	EXPENDI	TURES	CURRENT	VARIANCE
DESCRIPTION	ORIGINAL	CURRENT	PERIOD	TO DATE	PERIOD	TO DATE	FORECAST	(7-2)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)_	(8)
CONSTRUCTION	0	49,404	اه	43,085	946	24,520	60,036	10,632
PROFESSIONAL SERVICES	0	17,484	0	1 6,4 64	o	9,573	17,657	173
REAL ESTATE	0	0	ا ه	o	0	37	o	0
UTILITY/AGENCY	0	٥	ه	o	٥	o	اه	٥
FORCE ACCOUNTS	ł I						_	_
SPECIAL PROGRAMS	0	20	o	452	0	77	3,142	3,122
CONTINGENCY		1,348	٥	o	0	0	1,024	(324
PROJECT REVENUE	0	0	o	o	o	0	(11,462)	(11,462
NEW REQ. SUBTOTAL	0	68,256	0	60,001	948	34,207	70,397	2,141
PROJECT GRAND TOTAL	8,018,367	8,531,450	(3,699)	5,957,502	57,460	4,902,880	8,507,750	(23,700)

BUDGET STATUS - December 27, 1996 (in \$ Millions)





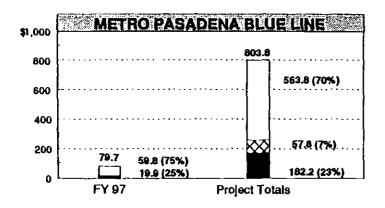




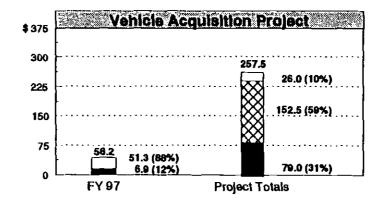
Actual Spent Encumbered Remaining Budget

Page 5

BUDGET STATUS - December 27, 1996 (in \$ Millions)

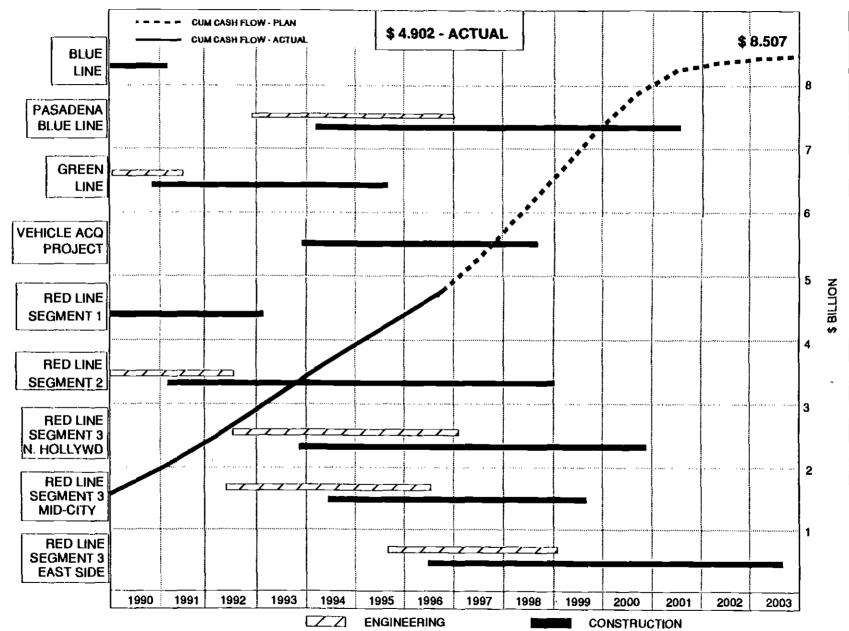


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Actual Spent Encumbered Remaining Budget

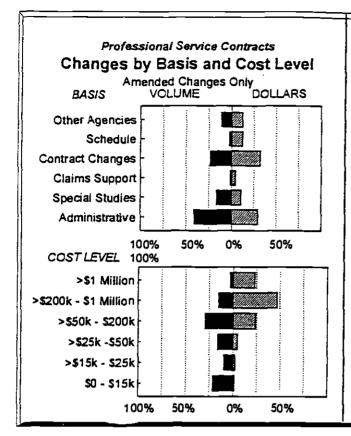
RAIL PROGRAM STATUS SUMMARY



METROPOLITAN TRANSPORTATION AUTHORITY

						MEINO					UTHORI	I F T								
	METR	DBLUE	PASA	DENA	METRO	GREEN			RCES (II		METRO	RED LINE	METRO	RED LINE	METRO	RED UNE	VEHICLE	ACOUIS	CEMBER 1	
ļ.	UN		BLUE		LIN			ENT I **	SEGME	NT 2	SEG	- NH	860:	- MC	SEGS	· <u>68</u>	PRO	JECT	PROG	MAR
ORIGINAL SCOPE:		*	\$	- %	\$	*		- *	-	*	8	*_		*		×	- \$ _	*		<u>*</u>
FTA-SECTION 3			:			;	605.3	42	667.0	40	581.0	52	242.5	49	492.9	50			2688.7	32
FTA - OYHER														ŀ			11.9	4	11.9	o
ISTEA - FED BUHFACE TRANSIT PROG									52.1	3	50.0	4		İ	25.0	2	84.0	32	211.1	3
FEO-ISTEA RSTP/CMAQ				}							39.9	3	40.4	8	86.1	9	8.1	3	172.5	2
FTA-SECTION 9				,			90.6	6							ŀ	<u> </u>			90.6	,
STATE			387.8	48	108.4	15	210.3	15	133.0	8	65.0	5	40.0	8	65.0	7	33.5	13	1041.0	12
STATE TSM MATCH		ļ					ļ				3.2	o	7.2	2	11.1	1		1	21.5	0
88 1995 TRUST FUND											75.0	6							75.0	,
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 DIBABILITY ACT)		<u> </u>		1	6.0	1												ŀ	6.0	0
CITY OF LOS ANGELES							34.0		ŀ		190.7	14	9.0	'	0.3	0		ļ	391.5	5
BENEFIT ASSESSMENT							130.3	1		4	13.5	1							201.8	2
COST OVERRUN ACCOUNT						_	200.1	14											200.1	2
TOTAL	877.2	100	8.608	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)		1							68.7	4	2.7	0							71.4	1
FED ISTEA RSTP/CMAQ			Į			į			2.5	o	ļ								2.5	0
TOTAL	-					Ì			71.2	4	2.7	0							73.9	1

Note: Date reflects Current Budget



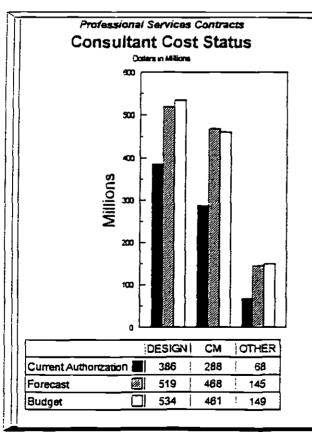
CHANGE BASIS ANALYSIS

Administrative changes account for approximately 42% or 304 of the 731 Consultant Change Notices overall. Administrative changes include capital equipment, facilities and extra work requested by the MTA. This equals 29% of the overall change cost of amended changes.

CHANGE COST LEVEL ANALYSIS

As shown on the Cost Level Analysis chart opposite, the MTA Board approves 69.5% of all change costs associated with the Rail Project or \$69M of a total change cost of \$99M. This equals 20% of the total change volume or 148 of 731 total changes.

Note: Data for Basis and Cost charts includes only MTA Board amended changes.



PROFESSIONAL SERVICES COST ANALYSIS

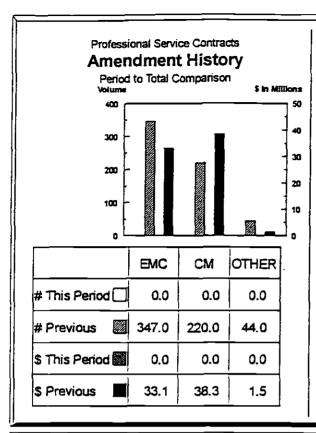
Categories represent all professional services contracts, not individual contracts (i.e. "design" includes all line 11 contracts not just EMC).

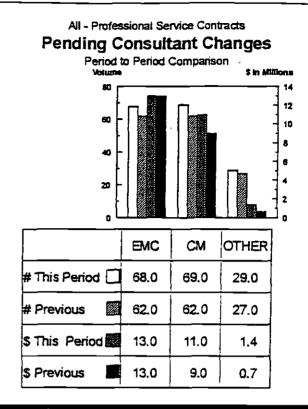
The forecast cost for design and other consultant contracts is below the current budget. While the forecast for construction management contracts continues to slightly exceed the budget amount, due to delays in project activities on the Metro Red Line Eastside Extension and Pasadena Blue Line

Data Source:

CMS: Consultant Contract Authorization, Forecast and Budget Values.

CHNGSAMP/12/98





CONSULTANT CHANGE NOTICE ANALYSIS

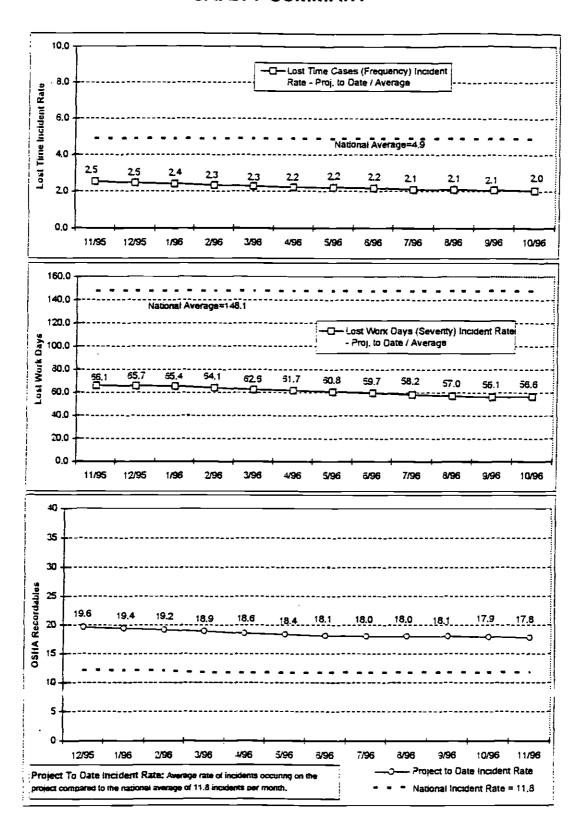
Two new Requests for Change (RFC) were received during the period with an estimated value of \$53 thousand.

Fifteen new Consultant Change Notices (CCN's) were assigned or issued during the period with an estimated value of \$3.2 million.

No CCN's were amended by the MTA Board during the period.

Four CCN's were canceled or withdrawn during the period.

SAFETY SUMMARY



EXECUTIVE SUMMARY

Summary Status Report

Period Ending - December 27, 1996



MAJOR ACTIVITIES THIS PERIOD Sierra Madre Villa C6435 - Reconstruction & Retrofit of Allen Avenue Steel & Concrete Bridges Lake Avenue • Lake Ave.: Completed the moving of southbound K-rails pursuant to the City of Pasadena traffic requirements during the Memorial Park holiday moratorium period. Allen Ave.: Completed installation of Bent #2 column casing. • Sierra Madre Blvd.: Completed concrete Del Mar placement for the top deck. Restored roadway section and traffic control system to Fillmore Street original condition. • Lacy St. Bridge: Approval of design from CalTrans is near completion. Mission Street Avenue 57 C6430 - Arroyo Seco Bridge Reconstruction Continued contract close-out activities. Southwest Museum Completed majority of the punch list activities. French Avenue Avenue 26, Chinatown Jnion Station

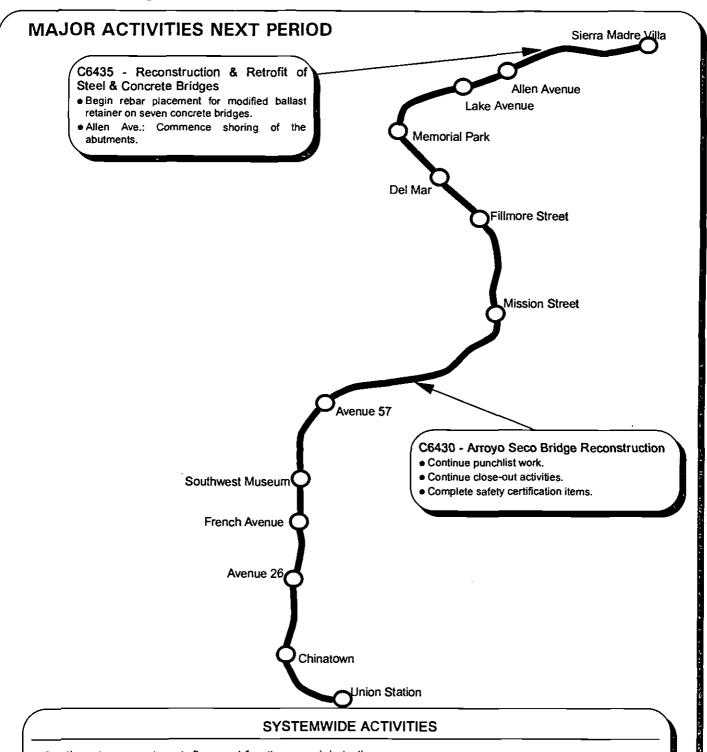
SYSTEMWIDE ACTIVITIES

- Continued interface with community representatives regarding work scope changes.
- Completed negotiations of CWO 40, estimated costs for final design of C6420, C6440, C6450, H0070, H0090, and Ave. 57/Southwest Museum Stations, with the Design Consultants.
- Continued final design for Contract C6450, Del Mar to Memorial Park Line Segment.
- Continued review of CWO 41, estimated costs for final design of C6390, C6400, C6460, C6475, C6480, C6500, C6510 and C6520, in preparation for final negotiations with the Design Consultants.

Summary Status Report

Period Ending - December 27, 1996





- Continue to support cash flow and funding special studies.
- Continue final design for Contract C6450, Del Mar to Memorial Park Line Segment.
- Complete and start negotiations of CWO 41, estimated costs for final design.
- Project records for Contract C6410, L.A. River Bridge, will be transmitted to Records Management Center (RMC) in late January.

Summary Status Report Period Ending - December 27, 1996



BUDGET

	Amount (\$ in mil)	Change from Last Month (\$ in mil)
Original Budget	841	None
Approved Budget	804	None
Current Forecast	804	None
Commitments	239	-12
Expenditures	182	+ 1

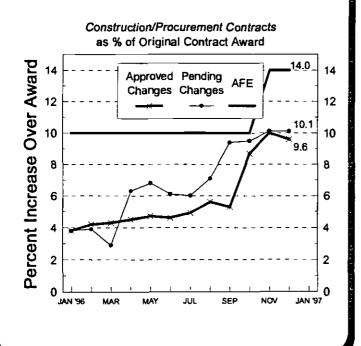
ADDITIONAL LOCALLY FUNDED ACTIVITIES

	Amount (\$ in mil)	Change from Last Month (\$ in mil)
Original Budget	0	None
Approved Budget	0	None
Current Forecast	1	None
Commitments	1	None
Expenditures	0	None

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.
- There is no change to the overall budget or forecast during the period. The MTA Board approved the change notice for Contract C6435, Reconstruction & Retrofit of Steel & Concrete Bridges, for \$1.2M for the fire damage repair at the Lacy St. Bridge. An insurance rebate from the responsible trucking firm is anticipated to offset this cost.
- The decrease in Commitments during the period is primarily due to an adjustment to reflect the total NTE amounts for the various CWO's issued to the Design Consultants. Prior to this period, the full anticipated value of the individual CWO was committed.
- The increase in Expenditures for December is due to work performed on Contract C6435, Owner's Insurance, MTA Administration, and Professional Services contracts.

CONTRACT CHANGES



CONTRACT CHANGE ANALYSIS

The pending changes and AFE percentages remained the same in December. Approved and pending changes processed to date are less than the AFE values. Approved changes decreased slightly during the period to delete the 9-Way Ductbank & Related Electrical for Contract C6430.

Approved and pending changes with values in excess of \$200K include:

- C6410 (L.A. River Bridge) Differing Site Conditions and Adjustment of Bid Quantities.
- C6430 (Arroyo Seco Bridge Reconstr.) -Adjustment of Bid Quantities and Cost for Operating Engineer's Strike.
- C6435 (Reconstruction & Retrofit of Steel & Concrete Bridges) - Lacy St. Bridge Repair, Delayed Release of Lake & Allen Ave. Work Scope and Differing Site Conditions - Pea Gravel.

Summary Status Report

Period Ending - December 27, 1996



SCHEDULE

Critical Path

Float (Calendar Days)

		Change from Last Month
Current ROD	May 2001	None
Design Progress*	80.3%	None
Constr. Progress	8.8%	+0.2

-91 days

-16

SCHEDULE ANALYSIS

- The forecast ROD is May 2001. The schedule update for December shows 91 calendar days (CD) of negative float.
- Delays in the schedule are due primarily to finalizing scope definition, obtaining community concurrence for cost reduction items, and starting final design. The Design Consultants have been asked to submit a recovery plan. Refer to pages ES-6, Start of Final Design and ES-7, Community Concurrence with Design for further detail.
- A complete recovery of negative float is a possibility once final design progresses to the point that a detailed constructability review can be conducted on the remaining critical path contracts.
- Final design on the most critical package, Contract C6450, Del Mar to Memorial Park Line Segment, continues on a limited basis.

Cost Estimate At Completion (In millons) 1.4 December 96 1.2 Current Contract \$10.1 Forecast \$11.7 0.8 0.8 Oscillative Adv. 50% 60% 70% 80% 90% 100% Design % Complete

EMC COST PERFORMANCE ANALYSIS

- The chart at the left summarizes CWO's which are in place to facilitate the start of final design. This chart includes CWO 037 which was approved for development of a PIP and definition of new scope to incorporate cost reduction items and CWO 039 which is for administrative support for final design. Refer to page EPC-4 for further analysis.
- Currently, all open CWO's total \$83.3M; the Design Consultants overall forecast cost increased from \$119.2M to \$121.8M. The forecast includes Design Support During Construction, WACN's, and outstanding RFC's for CWO 037.
- Through the November period, the delays in the activities required to start final design have resulted in negative float to the schedule of 75 calendar days. This will extend the Design Consultants CWO 039 for Project Management support from the end of 1997 to mid-March 1998.

^{*}Based on original design work scope; design will be rebaselined pending an evaluation of design status, detailed definition of new work scope & preparation of an execution

Summary Status Report

Period Ending - December 27, 1996



CONSTRUCTION SAFETY STATISTICS

Change from Last Month

Recordable Injury Rate:

The number of recorded injuries excluding simple first aid or minor medical treatment per 100 man years.

1994 National Average 11.8

Project Rate 3.6 0.5

Lost Time Incident Rate:

The number of injuries resulting in days away from work per 100 man years.

1994 National Average 4.9

Project Rate 0.0 None

Lost Work Days:

The number of lost work days per 100 man years.

1991 National Average 148.1

Project Rate (Cum.) 0.0 None

NOTE: Based on November statistics.

CONSTRUCTION SAFETY SUMMARY

 The Project is incurring 16,000 work hours per month. Through the November reporting period, the Project has completed over 605,000 work hours without a Lost Time injury and only eleven Recordable Injury cases.

AREAS OF CONCERN

ONGOING

Item (Date Initiated: September 1996)

Validation of \$803.9M Baseline Estimate

Concern/Impact

When the Pasadena Blue Line Project was re-adopted in February 1996, the Design Consultants had not prepared updated estimates which included the proposed Value Engineering/Cost Containment items approved by the MTA Board. Included in the scope of CWO 037 was the development of capital cost estimates based on the new construction work scope.

Status/Action

The Design Consultant has submitted the estimates for the construction work packages. Pasadena Blue Line Project Staff will review these estimates and formalize the forecast for indirect costs such as Professional Services, Real Estate, and Master Cooperative Agreements in order to update the total Project Forecast. It is expected that this exercise will be complete by the end of the first quarter 1997.

Summary Status Report Period Ending - December 27, 1996



AREAS OF CONCERN (Con't)

ONGOING (Cont)

Item (Date Initiated: March 1996)

Start of Final Design

Concern/Impact

The current schedule shows -91 calendar days of negative float because final design has not begun as planned.

Status/Action

Final design production began on a limited basis for C6450, Del Mar to Memorial Park Line Segment. Final design on the remainder of the projects has not started because the Design Consultant is experiencing delays in mobilizing section designers and completing negotiations with MTA. If the start of engineering continues to be delayed, the projected ROD may slip and there will be a corresponding impact to the Project Cost forecast for additional escalation and administrative cost. The Design Consultant have been asked to submit a recovery plan.

Item (Date Initiated: August 1996)

Real Estate Availability

Concern/Impact

In general, real estate availability is a concern to the extent that certain parcels may not be available to support the schedule for contracts on the critical path. The most critical real estate issues are related to:

<u>Ratkovich Property</u>: A parcel which is owned by the Federal Government and leased by Ratkovich Property is required for the Chinatown Aerial. This property may not be available in sufficient time to support the construction schedule. A resolution must be reached with Ratkovich because this parcel is not eligible for the condemnation process. In order to support the schedule, the property must be available by January 1998.

<u>Certification of Parcels for Underpinning</u>: Certification of parcels required for underpinning associated with Contract C6450, Del Mar to Memorial Park Line Segment, is required in order to obtain necessary easements for construction. To support the current construction schedule, these parcels must be available by January 1998.

Status/Action

Regarding the Ratkovich property, MTA submitted a follow-up letter to Ratkovich requesting additional information concerning the lease on the property. The parcels for underpinning were certified in mid November.

Summary Status Report Period Ending - December 27, 1996



AREAS OF CONCERN (Con't)

ONGOING (Con't)

Item (Date Initiated: August 1996)

Community Concurrence With Design

Concern/Impact

Community concurrence with the Chinatown Station redesign and upgrades to Marmion Way between 50th and 58th Avenues remain outstanding. For Chinatown, issues relating to the number of elevators and the canopy, platform, and plaza design remain to be resolved. These issues may delay the final design of the station and impact the schedule.

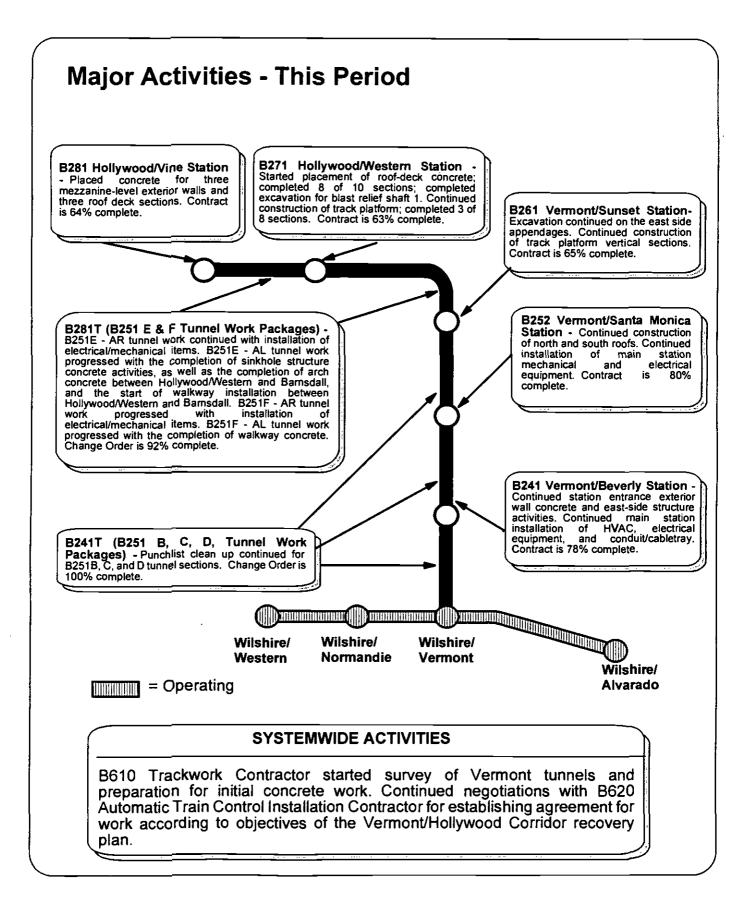
Status/Action

Although the Chinatown Station has been approved by the MTA Board to start final engineering, the design cannot be completed until these issues are resolved with community representatives. During December, discussions continued on the choice of canopy, platform, and plaza design. It has been agreed to remove the Chinatown Plaza from the existing contract (C6390, Chinatown Aerial Structure) to allow design work to proceed and additional time for community input. A final decision on the station design is anticipated prior to the January 1997 Board meeting. Additional conceptual designs for Marmion Way are being prepared for the community input. Separate funding is being pursued to fund the community requested upgrades.

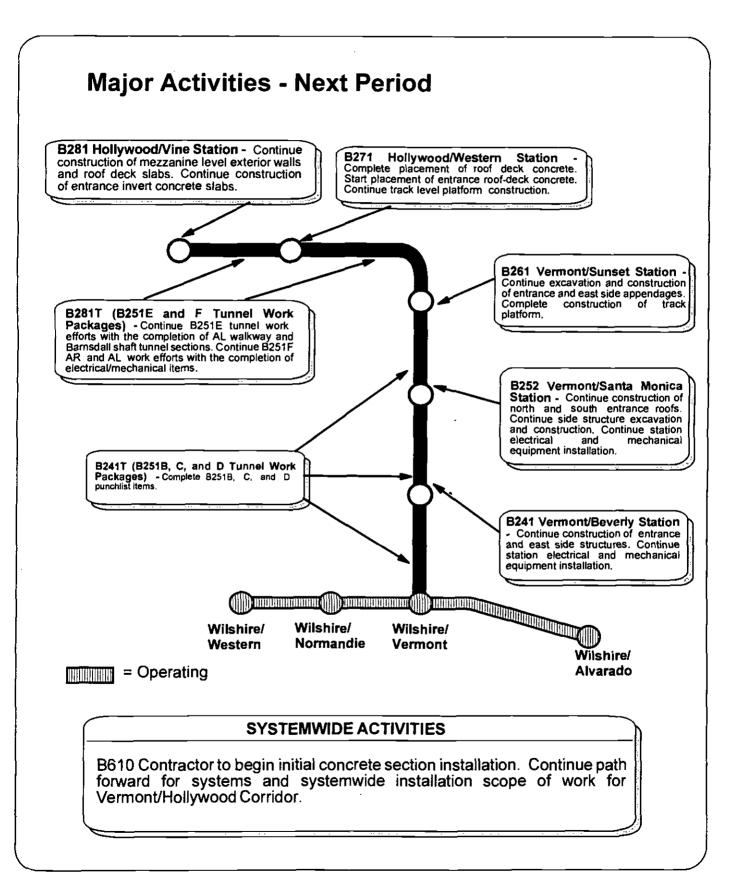
METRO RED LINE SEGMENT 2

EXECUTIVE SUMMARY











BUDGET

Original Scope	Amount (in \$ mil)	Change from Last Month (in \$ mil)
Original Budget	1,446	None
Approved Budget	1,576	None
Current Forecast	1,576	None
Expenditures	1,242	20

Additional Locally Funded Activities

Original Budget	0	None
Approved Budget	65	None
Current Forecast	6 5	None
Expenditures	31	1

BUDGET ANALYSIS

Original Scope

Original scope expenditures increased \$20 million in construction and professional services contracts. The expenditures to date are 78.8% of the current total forecast.

Additional Locally Funded Activities

Expenditures for Additional Locally Funded Activities increased \$1 million in construction contracts. The expenditures to date are 47.7% of the current total forecast.

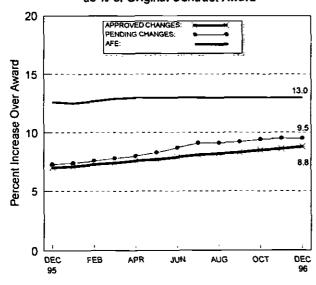
Overall, there were no changes to the total budget and forecast categories for either Original or Additional Locally Funded Activities this period.

This period's expenditures reflect the cumulative expenditure amounts through November.

Expenditure data lags the report date by one month.

CONTRACT CHANGES

Construction/Procurement Contracts as % of Original Contract Award



CONTRACT CHANGE ANALYSIS

The percent increase over the award value for approved changes showed a slight increase this period; this was attributable to the progress of work on the Vermont, Beverly, and Santa Monica Station (B241, B252) contracts, and Vermont Tunnel Completion (B241T) contract. Pending changes and AFE remained the same.

The significant approved changes total an increase of \$1.4 million, including:

- B241, Vermont/Beverly Station-Executed CO 78, Emergency exit doors; Work Authorized Change Notice (WACN) 33.01, Public address speaker wiring; and WACN 147, Sewer cross connect installation.
- B252, Vermont/Santa Monica Station-WACN 154, Concrete reinforcing steel quantities.
- B241T, Vermont Tunnel Completion-Executed CO 25.01, Leak Repairs in the tunnels (B, C and D sections); and WACN 37.02, Seal gasoline Leaks.



SCHEDULE

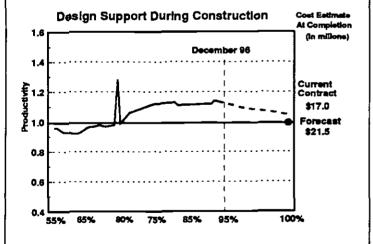
<u>Vermont/Hollyw</u>	Change from Last Month	
Current ROD	Dec. 31, 1998	None
Design Progress	93.2%	0.4
Critical Path Float	-109 Days	None
Const. Progress	82.0%	0.7%

SCHEDULE ANALYSIS

Vermont/Hollywood Corridor

- The Vermont/Hollywood Corridor critical path shifted to start of concrete operations for B610, Trackwork Installation. The critical path then continues through B620, Train Control Installation; System Integrated Testing; and Pre-Revenue Operations.
- Completion of B251E and B261 for track access are now secondary critical paths, due to delays in contract B610 trackwork activities, resulting from safety engineer approval and receipt of final survey data.
- The forecast revenue operations date remained the same this period. Kajima/Ray Wilson maintained progress on the critical B251E and B251F tunnel construction efforts.

EMC COST PERFORMANCE



EMC COST PERFORMANCE ANALYSIS

The EMC Cost Performance chart represents productivity for design support during construction (DSDC) on a cumulative to-date basis. At the 94.6% completion level, the EMC has a Cost Performance Index (CPI) of 1.13. This is based on the ratio of weighted per-unit budget for Requests for Information (RFIs), submittals, and Change Notices, compared to the per unit actuals to complete the work (in hours).

The EMC is processing DSDC items at an average rate of 1.5 fewer hours per item than planned, resulting in the favorable CPI. However, 45% more items are being processed than originally planned, resulting in a dollar forecast that exceeds the current contract value. This increased volume has occurred for the Wilshire Corridor facilities contracts, and forecasts for the Vermont/Hollywood Corridor and facility systemwide contracts show a similar trend.

Additional budget for this increased volume will be required. CCN 500, providing budget through Fiscal Year 1997, has been negotiated and approved by the Change Control Board; this CCN will be presented to the MTA Board next period for approval. Current funding for the Segment 2 project will be exhausted in March 1997.



CONSTRUCTION SAFETY STATISTICS

Project-to-Date Rates	Change From Last Month		
Recordable Injury Rate			
The number of recorded injuries, excluding simple first aid or minor medical treatment, per 100 man years.			
1994 National Average	11.8		
Project Rate	19.8	-0.2	
Lost Time Incident Rate			
The number of injuries resulting in days away from work per 100 man years.			
1994 National Average	4.9		
Project Rate	2.5	-0.1	
Lost Work Days			
The number of lost work days per 100 man years.			
1991 National Average	148.1		
Project Rate	69.1	-0.6	
(Based on November statistics)			

CONSTRUCTION SAFETY SUMMARY

- Over 149,000 work hours were completed in November without a Lost Time Injury.
- Lost Time Injuries (year-to-date) have occurred at a rate of 1.1 per 200,000 work hours. This is approximately 75% less than the National Average of 4.9.
- To date, the project has completed over 9,950,000 work hours and will surpass 10,000,000 work hours in December. These statistics reduce the impact that the monthly safety statistics have on the project-to-date rates.

NEW

item (initiated December 1996)

Vermont/Sunset Station (B261) interim and final milestone completion

Concern/Impact

The level of Contractor cooperation in addressing settlement of time and safety-related issues over the past several months has been limited. As a result, the Construction Manager has little confidence that the Contractor will proceed with the work in a timely enough fashion to support B610, B631, B740/B745, and overall contract completion requirements.

Status/Action

Negotiations with Contractor project personnel and company executives have been conducted. Additional meetings with Contractor are planned for January; a recommended course of action is being discussed with MTA management.



ONGOING

Item (Initiated June 1996)

Hollywood Boulevard Stations and Line Trackwork Access

Concern/Impact

As a result of past delays in installation of piles and excavation of the B251E sinkhole shaft and B251F Hollywood/Vine access shaft, completion forecasts for B251E and F tunnel trackwork milestones impact the project completion forecast.

Status/Action

The Contractor's aggressive efforts to perform multiple tunnel and concurrent invert, arch, and walkway concrete operations has resulted in some schedule improvements and an increased level of confidence that the Contractor will maintain schedule. Schedule improvement strategies have been negotiated with the contractor. It is anticipated that the B251E AR and B251F AR and AL tunnel sections will be essentially completed in January 1997. The B251E AL tunnel section will be essentially completed by early March 1997.

METRO RED LINE SEGMENT 3 NORTH HOLLYWOOD EXTENSION

EXECUTIVE SUMMARY



MAJOR ACTIVITIES THIS PERIOD NORTH HOLLYWOOD **STATION** CONTRACT C0351 - KAJIMA/RAY WILSON North Hollywood Station CONTRACT C0331 - OBAYASHI CORPORATION Completed HDPE at Invert and low walls North Hollywood Tunnel Completed grounding system in Staging Completed crosspassage invert concrete to Area 3 North Hollywood Station Completed 70% of the concrete mud mat Began AL tunnel Invart concrete Installation Continued rebar column fabrication Completed most of the rebar installation for first invert slab and wall pour at north end CONTRACT C0321 - TUTOR/SALIBA-PERINI **Universal City Station** Station excavation is 95% complete Completed rebar installation for invert lifts 3 through 8 UNIVERSAL CITY Started rebar installation for west and east walls at STATION lift 1 Completed grounding grid, mudmat and HDPE liner CONTRACT C0327 • WILLIAM L. OLSON CONTRACTING for invert lifts 9 and 10 Universal City Station Demolition for Station Access Road Placed 2,800 cy of structural concrete for invert Contract close-out in progress lifts 3, 4 and 5 CONTRACT C0311 - TRAYLOR BROS/FRONTIER-KEMPER CONTRACT C0301 - TUTOR/SALIBA-PERINI Line Section from Universal City Station to Station 630+00 Hollywood/Highland Station and Tunnals Completed 31% TBM excavation in the AR tunnel Completed 96% of the station excavation Completed 28% TBM excavation in the AL tunnel Completed 90% of McCadden PI concrete (no progress) Excavated 60' heading on AL Seismic Section Installed all Level C struts Excaveted 24' heading on AR Seismic Section Installed 51 of 53 Level D struts Grouted seasonal springs water inflow in the AR tunnel Concreted Invert and side walls for crosspassages 37, Shotcrete vold in the AL Seismic Section 38 and 39 Removed all tunnel liners Placed invertioncrete for lifts 1 through 4 LA BREA **ACCESS SHAFTS** to HOLLYWOOD / VINE STATION **HOLLYWOOD / HIGHLAND STATION** SYSTEMWIDE ACTIVITIES

Contract B620 (Automatic Train Control) issued DCN 48.00 for CTE review and responded to the comments. Prepared checklist of Segment 2 CNs and Lessons Learned for Segment 3 North Hollywood use.

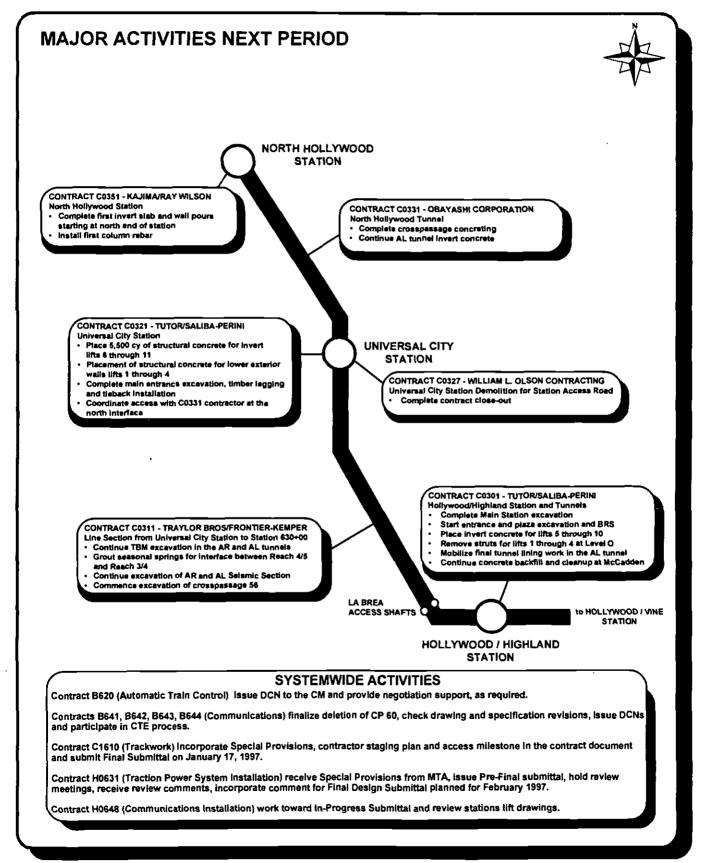
Contracts B641, B642, B643, B644 (Communications) continued incorporation of review comments in the technical information update, began preparation of DCNs and reviewed lift drawings.

Contract C1610 (Trackwork) completed modification of contract limits, welding sites issues, floating slab and single crossover.

Contract H0631 (Traction Power System Installation) completed Pre-Final drawing and technical specification and reviewed lift drawings.

Contract H0648 (Communication installation) commenced the design and reviewed stations lift drawings.





ES-2 EXE 8



BUDGET

ORIGINAL SCOPE ACTIVITIES

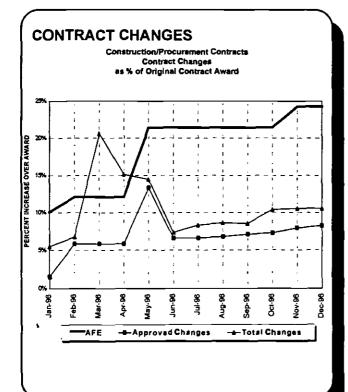
	Amount (in \$ mil)	Change from Last Month <u>(in \$ mil)</u>
Original Budget	1310.8	None
Approved Budget	1310.8	None
Current Forecast	1310.8	None
Expenditures	499.2	27.9

ADDITIONAL LOCALLY FUNDED ACTIVITIES (ALFA)

	Amount (in \$ mil)	Change from Last Month (in \$ mil)
Original Budget	0.0	None
Approved Budget	3.0	None
Current Forecast	8.0	None
Expenditures	3.6	None

BUDGET ANALYSIS

- The Approved Budget was updated this period to reflect Project Budget Change Request #4. There is no increase from the previous period. However, there were a number of construction contract budget values which were adjusted with all changes offset by a corresponding adjustment in Project Contingency.
- The Expenditures for Original Scope work and ALFA through the November period are 499.2M and \$3.6M, respectively. This represents 38.3% of the Total Current Forecast. Total expenditures for the current period were \$27.9M.
- ALFA Expenditures exceed the ALFA Current Forecast by \$2.7M. This is due to the charges associated with the Tunnel Settlement of Contract B251 (Vermont/Hollywood Tunnel). These ALFA charges are anticipated to be offset with revenues from insurance and claims settlement. Upon realization of these anticipated revenues, the expenditures are expected to fall in line with the \$0.8 M forecast.



CONTRACT CHANGE ANALYSIS

- The AFE for MRL Segment 3 North Hollywood Extension remained as previously reported in November 1996, namely 24.3% overall of the listed contracts award value.
- However, the value of Pending Change Orders reduced slightly this period by just under \$0.6M. This is primarily due to the balancing of increases in Contracts C0311 for \$1.9M, C0358 for \$910K and C0331 for \$330K; and reductions in Contracts B610 for (\$1M), C0301 for (\$1.7M), C0327 for (\$307K), and C0351 for (\$650K).
- The value for Approved Change Orders increased this period by a small percentage, primarily due to an increase of \$1.1M for Contract C0311. Also, contributing to this adjustment were increases for B710 for \$308K, C0321 for \$12K, and C0351 for \$58K. Current total Change Order exposure forecast at present (Approved plus Pending Changes) stands at 10.57% of contract award values, or \$51.6M, a small increase of approximately \$49K.

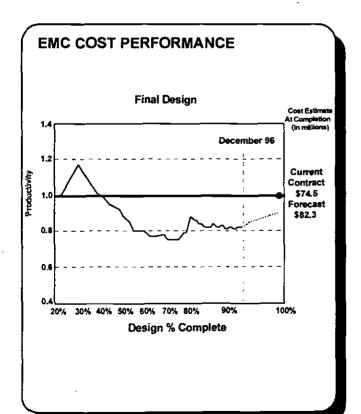
ES-3



SCHEDULE		
		Change from Last Month
Current ROD	May 17, 2000	0
Design Progress	93.5%	+1.0%
Construction Progress (estimated)	33%	+0.2%
Critical Path Float	0 cal. days	0

SCHEDULE ANALYSIS

- The December 1996 Project Master Schedule includes additional refinement to C1610 Trackwork Installation planning schedule, schedule impacts to C0301 Hollywood/Highland Station due to CN-63, Tunnel Deletion and C0351 Hollywood/Vine Station mitigation schedule. These changes had no impact to ROD. The project completion date forecast remains May 17, 2000.
- There continue to be unknown risks associated with the tunnels driven under the Santa Monica Mountains. However, at this point there is no project contingency left in the schedule. Mitigation plans for C0311 to partially recover the delays and to add some contingency to the program are underway. Meetings have been held and five different options have been firmly identified. A meeting to review the cost/benefit/risk analysis of these options will be held in early January 1997.
- In addition, a risk analysis on the TBM excavation to better forecast the excavation completion is being developed. Other areas under detailed review are, the track level rooms, north and south crossovers and crosspassages 44-48, excavation and concrete operations. Also under review are options to improve followon Contracts B620, B645 and start-up.
- Critical path continues to run through Contract C0311 (Line Section from Universal City Station to Station 630+00), C1610 (Trackwork Installation), B620 (Automatic Train Control), B645 (SCADA), Systems Integration Testing and Pre-Revenue Operations.



EMC COST PERFORMANCE ANALYSIS

- Final Design is approximately 93.5% complete, with all of the Major Facilities (Stations and Tunnels) at 100% complete. The Cost Performance Index is expected to improve to 90% over the next 12-18 months as the final design of site restoration and systems is completed, based on improvement in productivity and efficiencies.
- The MTA has calculated a Forecast at Completion of \$82.3M. The EMC has a current Forecast at Completion of \$85M.
- The MTA is working with the EMC to reduce their overall cost forecast by as much as 5% as the project moves fully into construction. To date, the MTA has worked with the EMC to reduce their forecast by \$2M over the past several months. The MTA has identified additional areas such as Design Change Notice (DCN) tasks that may be modified to lower the cost of EMC services.

ES-4 EXE 10



CONSTRUCTION SAFETY STATISTICS

CONSTRUCTION SA	FEII 3	IMIISIICS
Project-to-Date Rates Recordable Injury Rate: The number of recorded Injuries excluding simple first aid or minor medical treatment per 100 man years.		Change from Last Month
Project Rate	13.3	-0.2
Lost Time Rate: The number of Injuries resulting away from work per 100 man year 1994 National Average	ars. 4.9	we
Project Rate	0.4	N/C
Lost Work Days: The number of lost work days per 100 man years.		
1991 National Average	148.1	
Project Rate	19.6	1.2
• Segment 3 North Hollywo 120,000 work hours per m		rring over

CONSTRUCTION SAFETY SUMMARY

- No Lost Time Injury were reported in November.
- To date, the project has completed 2,597,000 work hours with only five Lost Time Injuries.
- Project-to-Date Lost Time Injury Rate continues at less than 10% of the last reported National Average.
- The increase in Lost Work Days Rate is due to carry over days incurred during November from injuries which occurred in previous months.

AREAS OF CONCERN

(Based on November statistics)

ONGOING

Item (Date initiated: October 1996)

ROD Mitigation Effort Maintained ROD of May 17, 2000, But Left the Project Schedule Without Unallocated Contingency

Concern/Impact

While there continues to be unknown risks associated with the excavation of the tunnels under the Santa Monica Mountains, allowances for all known-to-date schedule impacts due to ground conditions encountered in Reach 6C, seasonal springs protection, enclosure at the La Brea Shafts, additional 429' of standard tunnel excavation, and Special Seismic Section redesign are incorporated into the schedule. However, the project schedule has no other allowances for contingency.

Status/Action

Different options are currently being reviewed with the C0311 contractor to recover some of the lost time and to add contingency back into the program. Some of the mitigation options are shotcreting crossovers, resequencing track level rooms and tunnels concreting lining work. MTA's final review of these options is scheduled for early January. Other efforts continue to further refine downstream Contracts B620, B645 and start-up.

EXE 11 ES-5



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 community mitigation measures have impacted overall project schedule and forecasts. 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

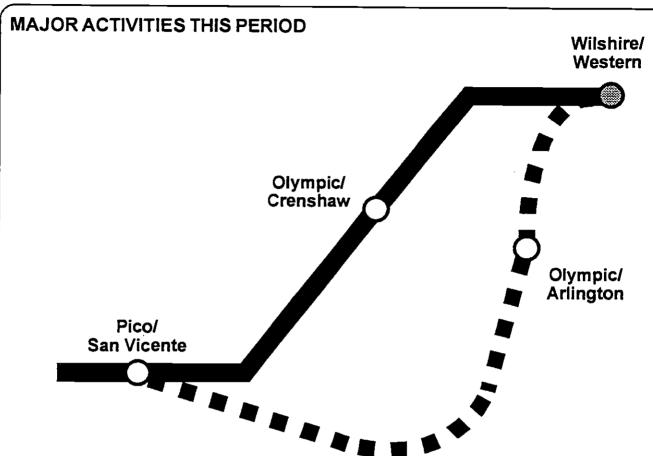
The effort to recover ROD, which included revisions to contingency and to follow-on Trackwork and Systems Installation contracts, was further revised in December. The result is a return to the original schedule for B620 and a further acceleration of C1610. The acceleration of B620 will be maintained as an option, only to mitigate future delays, if needed. Final MTA approval of C1610 resequencing is anticipated in early January 1997. The result is ROD of May 17, 2000 is maintained. Additional mitigation efforts are being investigated with C0311 in an effort to offset potential future delays as a high level of risk is still associated with the tunnel drives.

ES-6 EXE 12

METRO RED LINE SEGMENT 3
MID-CITY EXTENSION

EXECUTIVE SUMMARY

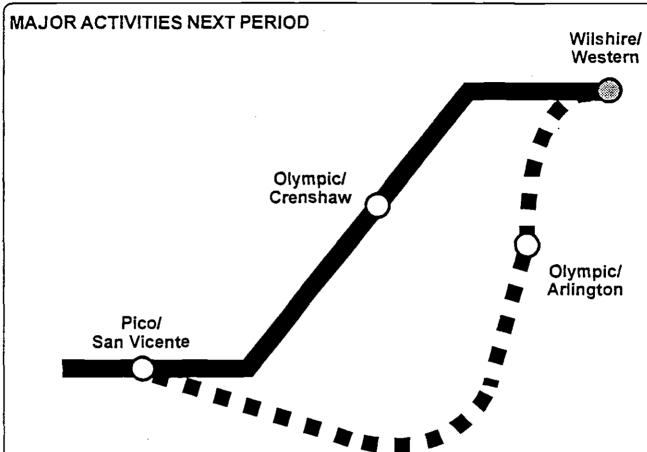




SYSTEMWIDE ACTIVITIES

- EMC continued work on a site plan feasibility study addressing interfaces between an expanded bus terminal and the two new station options at Pico/San Vicente. This will provide the necessary traffic circulation/access information needed to do the traffic and air quality analysis in the SEIS/SEIR.
- The NTP was issued and the environmental consultant, Ultrasystems Environmental, Inc., began preparation of the draft SEIS/SEIR incorporating the Wilton/Arlington alignment alternatives.





SYSTEMWIDE ACTIVITIES

- EMC will complete the study to develop feasible bus-interface site plans for the Pico/San Vicente Station options along Venice Boulevard.
- Ultrasystems Environmental Inc., will continue preparation of an SEIS/SEIR incorporating the Wilton/Arlington alignment alternatives.
- MTA is preparing formal notification to agencies, organizations, and the community that an SEIS/SEIR is being prepared.
- An Interagency Advisory Committee meeting is scheduled for the week of January 20 to provide an overview of Project alternatives and discuss the SEIS/SEIR process.
- MTA is preparing materials for a community open house meeting to be held next period.



BUDGET		
Original Budget	Amount (<u>\$ in mil)</u> 490.7	Change from Last Month (\$ in mil) None
Current Budget	490.7	None
Current Forecast	TBD	TBD
Expenditures	12.6	0.0
ADDITIONAL LOCALLY FUNDED ACTIVITIES Change from		
	Amount	Last Month
	<u>(\$ in mil)</u>	<u>(\$ in mil)</u>
Original Budget	0.0	0.0
Approved Budget	0.0	0.0
Current Forecast	0.0	0.0
Expenditures	0.0	0.0

BUDGET ANALYSIS

- The budget of \$490.7M was adopted in 1992 and is based on the original Project alignment and a July 1999 ROD.
- A revised Current Budget and forecast will be developed based on the re-alignment alternative selected and corresponding schedule.
- There is no Additional Locally Funded Activity at this time.

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

SCHEDULE ANALYSIS

- The Master Schedule will be rebaselined and engineering work will resume pending selection of the preferred alignment alternative by the Board.
- Completion of the SEIS/SEIR process is required to determine the alignment and configuration; the draft SEIS/SEIR is scheduled for completion in mid-1997.
- Work began this period on preparation of the draft SEIS/SEIR report and is proceeding according to the contract plan.

CONSTRUCTION SAFETY

No activity for this period.



AREAS OF CONCERN

NEW

There are no new areas of concern this period.

ONGOING

Item

Finalization of Mid-City Cost Estimate & Master Schedule (initiated 8/95)

Concern/Impact

The Mid-City Project cost and schedule baseline cannot be finalized until an alignment atternative is selected. Finalization of the master schedule for design and construction is on hold pending completion of the draft SEIS/SEIR and Board decision on the preferred atternative.

Status/Action

MTA is proceeding with a draft SEIS/SEIR to incorporate the Wilton/Arlington alignment alternatives. When the draft SEIS/SEIR is completed, the Board can make a decision on the alignment, a final SEIS/SEIR will be done, and the Project Master Schedule and preliminary cost estimates will be finalized.

RESOLVED

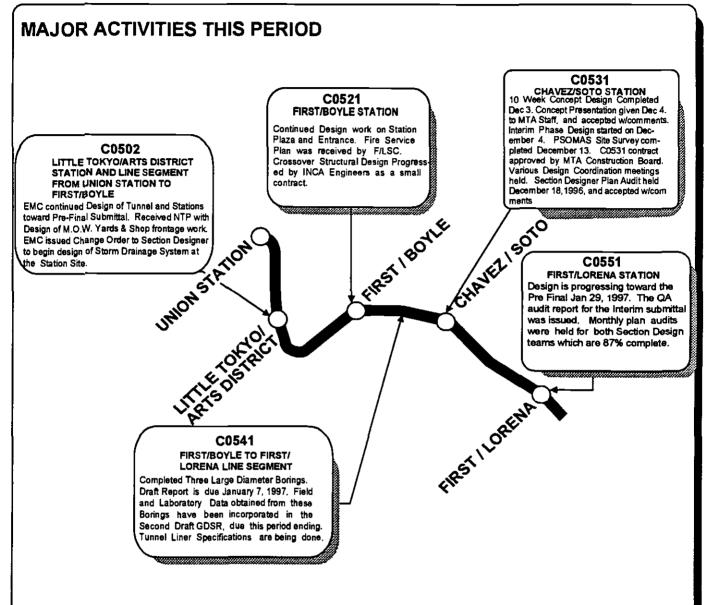
No outstanding issues were resolved this period.

METRO RED LINE SEGMENT 3

EAST SIDE EXTENSION

EXECUTIVE SUMMARY





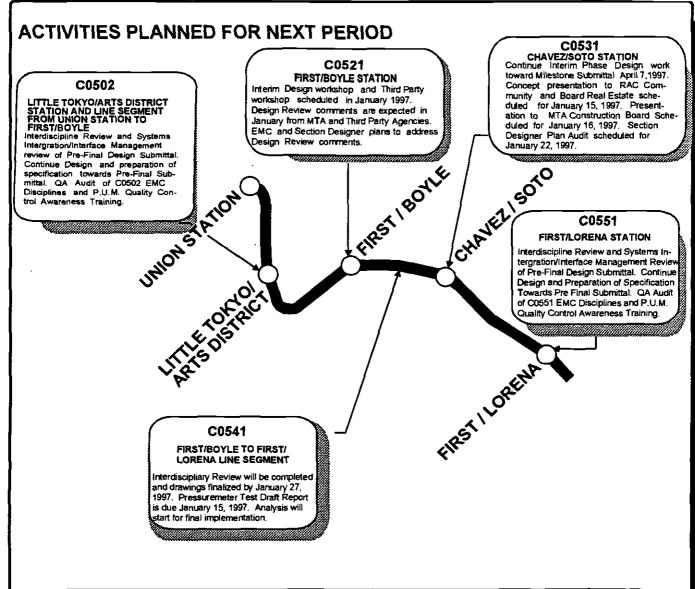
SYSTEMWIDE ACTIVITIES

SUBMITED TO MTA AMENDMENT #8 FOR CONTINUATION OF FINAL DESIGN SERVICES. CONTRACT C0538, PHASE I DEMOLITION, PRE-BID MEETING TOOK PLACE ON DECEMBER 2. THE BID OPENING IS SCHEDULED IN JANUARY. CONTRACT P1614, DIRECT FIXATION RAIL FASTENERS, CONTINUED WORK ON SPECIAL TRACKWORK COMPONENTS AND SPECIFICATIONS FOR THE PRE-FINAL SUBMITTAL. EMC QUALITY MANAGEMENT AUDIT REPORTS WERE PREPARED ON C0541 PRE-FINAL, C0551 INTERIM, C0521 INTERIM AND C0502 INTERIM. FOLLOW-UP HAS BEEN CONDUCTED ON EACH OF THESE AUDITS TO RESOLVE FINDINGS.

METRO RED LINE - Segment 3 East Side Extension

Summary Status Report Period Ending - December 27, 1996





SYSTEMWIDE ACTIVITIES

RECEIVE FROM MTA AMENDMENT #8 FOR CONTINUATION OF FINAL DESIGN SERVICES. MTA REAL ESTATE IS FORMALIZING THE PROPERTY ACQUISITION SCHEDULE. EMC TO RECERTIFY 25 SUB-EASEMENTS AND BUILDING PROTECTION EASEMENTS FOR C0541, AND 26 SUB SURFACE AND BUILDING PROTECTION EASEMENTS FOR C0502.



BUDGET

	Amount (In Millions)	Change from Last Month (In Millions)
Original Budget	\$979.6	None
Approved Budget	\$979.6	None
Current Forecast	\$1,010.0	None

OTHER LOCALLY FUNDED ACTIVITIES

	Amount (In Millions)	Change from Last Month (In Millions)
Original Budget	\$0.0	None
Approved Budget	\$0.0	None
Current Forecast	\$3.1	None

BUDGET ANALYSIS

- In December the original budget, current budget, and project forecast remained the same.
- Project Contingency was reduced by \$2.1M while B641 Radios was increased \$2.1M. The Internal transfer accounts for the difference between the May 1996 transfer from Mid City and the East Side requirement.
- EMC and MTA are continuing efforts to identify, analyze and implement additional cost mitigation measures to bring forecast back to budget.
- The current forecast includes the MTA Art Program forecast of \$3.1M which includes EMC Contract Work Order 0036 for \$312,000, as well as contracts for four station artists at \$30,000 each.

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



SCHEDULE		,
		ange from st Month
Current (FFGA) R.O.D.	Nov. 2002	None
Final Design progress	51.5%	4.5%
Construct. Progress	N/A	N/A
Critical Path Float	-374	-16

EMC COST PERFORMANCE 140% 120% 100% 100% 40% 20% Aug-96 Sep Oct Nov Dec

SCHEDULE ANALYSIS

- The forecast R.O.D. now stands at November 18, 2003.
 The forecast Revenue Operation Date is -374 calendar days (267 working days) behind the FFGA scheduled R.O.D. of November 11, 2002.
- The schedule has slipped an additional eleven (11) working days due to a slippage in the Camera Ready Design Submittal on contract C0502. The delay accurred because of the Two Pass vs the "One Pass with Option" tunnel liner, realignment of CR tunnel at the Unocal Tank Farm, and the development of specs due to the C0541 delay.
- Recovery potential of the full 374 days will be determined when substantially more detail is incorporated into the schedule to precisely define the critical activity relationships and refine the construction logic.
- Schedule mitigation measures currently being evaluated for consideration include:
 - -Construction/design activity resequencing
 - -Simplified contractor interfaces
 - -Possible second fiber optics crew
- The project schedule, which incorporates the approved baseline design schedule, has been completed by the EMC and submitted to the MTA for reviews.
- On December 20, 1996, the project schedule was turned over to PMA for maintenance and incorporation of further detail. PMAis working closely with EMC and is expected to continue this process until a CM contract has been awarded.

EMC COST PERFORMANCE ANALYSIS

The EMC Cost Performance Index for the month of December is 1.0 Final Design progress is 51.5%



AREAS OF CONCERN

NEW

Item [Initiated December 1996]

Design is on the Schedule Critical Path.

Concern/Impact

Due to a slippage in the Camera Ready submittal on contract C0502, design for this contract became critical and the projected R.O.D. for the project schedule was pushed out 11 working days. The delay was due to the "Two-Pass" vs "One-Pass with Option" tunnel liner, realignment of the CR tunnel at the Unocal Tank Farm, and development of specs due to the C0541 delay.

Status/Action

EMC is attempting to make the Camera Ready submittal ahead of the currently scheduled date of March 31, 1997.

ONGOING

Item [Initiated September 1996]

Increased Project Cost Forecasts.

Concern/Impact

The added costs of the tunnel boring machines and tunnel lining technologies increased the project forecast to \$46.5M million over the current budget. Further potential cost impacts foreseen at this time but still being quantified include commercial building protection, environmental mitigation along the tunnel alignment, increased real estate costs due to additional parcel acquisition and changes to MTA's Risk Management program.

Status/Action

Changes to the tunnel lining technology were developed, and resulted in a cost forecast reduction of \$2.1M. MTA and EMC are developing other mitigation measures to potentially offset the remainder of these increases. Cost reduction results from these efforts should begin to appear within the First Quarter of 1997.



AREAS OF CONCERN (Continued)

ONGOING

Item [Initiated September 1996]

EIS\EIR Addendum Approval Process

Concern/Impact

Twenty-One full take property acquisitions cannot be authorized by the MTA Board until the EIS/EIR Addendum has been approved. The EIR Addendum is expected to be approved by the Board in April 1997. This delay may impact the critical path and the current forecast R.O.D. of November 18, 2003, and may result in a cost escalation.

Status/Action

The earliest date foreseen for approving the EIS/EIR Addendum is April 1997. MTA is currently analyzing the approval process to mitigate this potential schedule delay.

ONGOING

Item [Initiated September 1996] Increased negative float to the Project Schedule.

Concern/Impact

The project schedule now stands at 374 calendar days (267 working days) of negative float behind the FFGA original R.O.D. of November 11, 2002. The new forecast R.O.D. is November 18, 2003. The schedule has slipped an additional eleven (11) working days due to a slippage in the Camera Ready Design Submittal on contract C0502. The delay occurred because of the "Two Pass" vs the "One Pass with Option" tunnel liner, realignment of CR tunnel at the Unocal Tank Farm, and the development of specs due to the C0541 delay.

Status/Action

On December 20, 1996 the project schedule was turned over to the PMA for maintenance and incorporation of further detail. PMA, EMC, and MTA will incorporate more detail within the project schedule and refine the construction sequences and logic to potentially reduce the negative float.



AREAS OF CONCERN (Continued)

ONGOING

Item [Initiated February 1996]

Real Estate acquisition for full-take parcels are critical.

Concern/Impact

Real Estate acquisition for many of the full-take parcels are critical and are impacting the project schedule. Twelve parcels are needed by the two tunneling contractors prior to the date the schedule indicates they will be available. In addition, twenty-one full-take property acquisitions cannot be authorized by the MTA Board until the EIS/EIR Addendum has been approved.

Status/Action

MTA Real Estate and Environmental Departments are formalizing the property acquisition/environmental schedules for all full-take parcels that require demolition. This process is expected to be completed within the first quarter of 1997. This will enable MTA management to direct their real estate department to accelerate the acquisition of those parcels that are deemed critical.

CLOSED

Item [Initiated September 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

PIP scope of services and corresponding cost negotiations were finalized with EMC in August. The Final Design schedule was submitted October 1 and formally approved by the MTA October 30, 1996. The Project Schedule has also been submitted.

VEHICLE ACQUISITION PROJECT

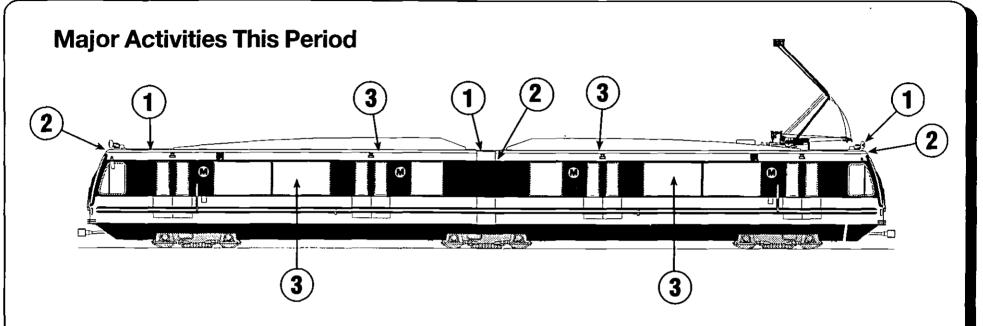
EXECUTIVE SUMMARY

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L.A. Light Rail Vehicle

Summary Status Report Period Ending - December 27, 1996



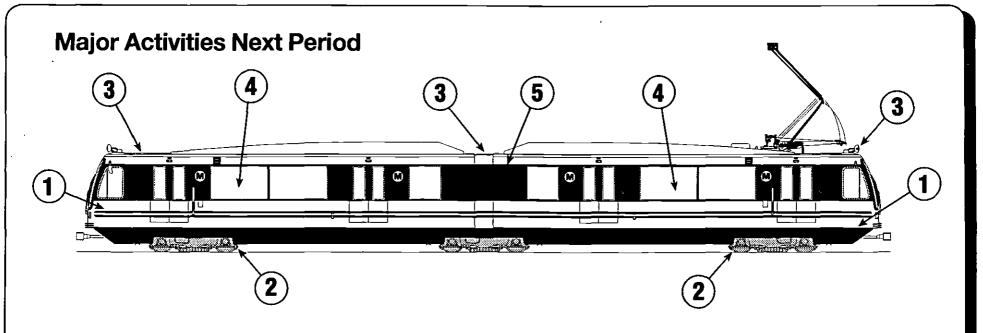


- 1. A third carshell was shipped from Carson to Sacramento for final assembly work. Work is progressing on cars 1 and 2 in Sacramento, though at slower pace than scheduled.
- 2. Attended Communications System First Article Inspection (FAI). The results were successful.
- 3. Met with HVAC and seat suppliers executives to discuss delays and review their corrective action plans. Both suppliers cited organizational disruptions as reason for the delays and submitted recovery plans to the MTA.
- 4. Review and approval of design and manufacturing of parts progressed.
- 5. Participated in start-up meetings to ensure that relevant divisions are informed and prepared for vehicle delivery and testing.

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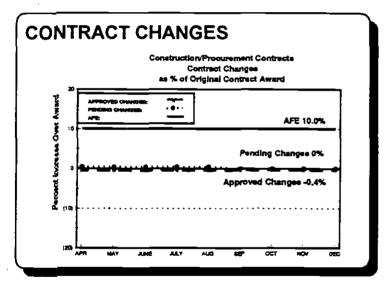
- 1. Meet with Siemens for Project Status Review and participate in Between-Car Warning Device demonstration.
- 2. Complete Power Truck Life Cycle Test.
- 3. Complete and ship the 4th carshell to Sacramento for assembly.
- 4. Resolve issues concerning vehicle delivery logistics to an MTA site, seat cover materials, and Between-Car Warning Devices.
- 5. Resolve remaining interface issues between STS and US & S.



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-
Expenditures	79.9	1.8

BUDGET ANALYSIS

- Car reduction effected 9/08/95 which will reduce the 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.



CONTRACT CHANGE ANALYSIS

The figures for December 1996 are as follows:

Approved Changes(0).4%)
Pending Changes	0%
AFE	10%

SCHEDULE Change from **Last Month** Schedule Car Delivery February 1998 N/C 1st Car 52nd Car June 1999 N/C **Design Progress** N/C 90-95% complete Fabrication Progress 30-35% complete N/C **Critical Path** Carshell assembly N/C N/C Delay (1st Car) -16 months November 1, 1996 **Data Date**

SCHEDULE ANALYSIS

The Contractor's last forecast schedule reflected a total of 16 months delay in 1st car deliveries. Subsystems with potential impact on delivery are air conditioning, doors and communications equipment. Carshell assembly 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 September 1996)

Lack of Progress in the Development of Manuals and Training

Concern/Impact

TransEd (TEI), Siemens' DBE Subcontractor for the User Education portion of the Contract, evidenced a lack of progress in both the development of Repair and Parts Manuals, and in the Vehicle Training Program.

Status/Action

STS determined that TransEd, the DBE subcontractor for training and manuals is in default. As a result, they are requesting the MTA allow them to contract with MRA, TransEd's sub-supplier. The MTA is reviewing Siemens' request.

Item (Date Initiated June 1996)

Vehicle Weight

Concern/Impact

Vehicle Weight Report, No. 11, indicates a margin of approximately 1,300 pounds under the specified weight. Although this news is encouraging, it represents less than a 1% margin.

Status/Action

Vehicle Weight Report, Revision 12, dated December 9, 1996, indicates the margin has shrunk to 0.6%, or just over 800 lbs. The estimate reflects actual equipment weights. STS continues to monitor vehicle weight during the assembly of the first car and make improvements wherever possible.



AREAS OF CONCERN (CON'T)

Item (Date Initiated March 1996)

Fatigue Test of Power Truck

Concern/Impact

The Duewag power truck failed fatigue testing for a third time. In November, at about 500,000 cycles into the 2,000,000 cycle test, cracks developed in the weld joining the friction brake support arm to the frame transom.

Status/Action

Duewag determined the cause of the problem is the weld itself, including the joint design and surface finish. Poor workmanship (welding) also entered into the equation. Proposed corrective measures include a revised joint design; different surface treatment; and improved quality control surveillance. Duewag implemented these corrective measures on a new truck, and will commence retesting in January. The proposed schedule is as follows:

•	02JAN97	Static Test Preparation in Berlin
•	16JAN97	Conduct Static Test
•	17JAN97	Fatigue Test Preparation
•	20JAN97	Conduct Fatigue Test
•	03FEB97	Dye Penetrant Test of Friction Brake Support Casting
•	04FEB97	Disassemble Truck Frame
•	05FEB97	Dve Penetrant Test of Truck Frame

Item (Date Initiated February 1996)

Schedule Slippage

Concern/Impact

The November delivery schedule indicates a delay of 16 months for the first car with delivery of the last car approximately 7 months late.

Status/Action

No change is anticipated in the December 1996 Report.



AREAS OF CONCERN (CON'T)

Item (Date Initiated November 1995)

Carborne Signal Equipment for 16 Standard Cars

Concern/Impact

The current plan calls for 16 LA Standard Cars to be assigned to the Metro Blue Line (LA→Long Beach Branch). The Standard Cars require on-board signal equipment compatible with the Blue Line wayside before they can enter revenue service. STS was requested to provide a proposal for the supply of this equipment.

Status/Action

Sigmens' response to the MTA's initial proposal review is pending.

Item (Date Initiated July 1995)

Cancellation of 22 Standard Cars

Concern/Impact

STS requested \$10 million in damages from the cancellation of 22 cars. This claim must be validated before payment can be made.

Status/Action

Back-up data from STS is under evaluation by MTA.



AREAS OF CONCERN (CON'T)

Item (Date Initiated March 1995)

HVAC Design

Concern/Impact

The Prototype Unit was completed and inspected. The first systems test has been delayed due to postponements by Sutrak.

Status/Action

In an executive level meeting held this month, Sutrak cited corporate reorganization as the reason for their delay. Sutrak's President, stated that the reorganization is behind them, and Sutrak-USA is now an independent entity, with an exclusive license to produce the P2000 HVAC design in the United States.

Design Conformance Testing (initiated in November) is scheduled for mid-January in Lamar, CO. First Article Inspection is scheduled for late January.

This item will remain as an area of concern until Sutrak produces specification-compliant units in the required time frame.

RESOLVED

Item (Date Initiated September 1996)

Lack of Progress in the Design of Vehicle Communications

Concern/Impact

Siemens selected Vale Harmon (VH) of Montreal to design and build the vehicle communications systems. To date, two areas of concern exist:

- VH is consistently late with design deliverables. Because their deliverables are on the critical path, this may impact the delivery of cars.
- VH has not always demonstrated a comprehensive understanding of the P2000 contract technical requirements.

Status/Action

The First Article Inspection of the Communications Equipment was successfully conducted in December. The supply of communications equipment is no longer a critical issue.

QA / TQM ISSUES

STS EQUIPMENT SUPPLIER INSPECTIONS

- Adtranz performed testing of truck mounting hardware for freedom from the effects of hydrogen embrittlement.
- STS reviewed Sutrak's Quality Assurance Manual. It will be submitted to LTK provided it meets STS and P2000
 Quality Assurance requirements.
- LTK held a review meeting with Coach and Car executive management to discuss improved performance for passenger seats prior to First Article Inspections.

DUEWAG TRUCK FRAME AND BOLSTER MANUFACTURING

Cracks in the weld metal and parent metal at the attachment of the power truck's disc brake arm casting were
caused by a welding defect, supplemented by poor surface finishing. Corrective action includes redesign of the
weld joint, establishing rigorous weld inspection techniques, and improved finishing of finished weld to reduce
concentration of stresses. Fatigue Testing will commence in January 1997 on a new truck frame after all
corrective measures have been implemented.

CARSON CARSHELL MANUFACTURING

- Shipment of the fourth carshell has been delayed due to several refections of the paint finish on the A-car section. The problem was identified as a incorrect spray nozzle. The repainted carshell is scheduled for shipment in January 1997.
- Manufacturing of the eleventh carshell commenced.
- Dimensional inspections were conducted on the seventh and eighth carshells.
- STS reported a low rejection rate of parts received from suppliers.
- STS progressed in the identification and storage of noncompliant materials.
- LTK continued to close the surveillance of material controls.

SACRAMENTO FINAL ASSEMBLY

- Inspection monitoring of the first and second carshell continued.
- Car no. 201 progressed to the wiring and cab console fit-up stages.
- Car no. 202 was thermally insulated.
- Discussions of engineering change verification resulted in the clarification of the types of significant changes affecting form, fit and function requiring the resubmittal of drawings for approval. STS submitted vehicle mod and repair instructions for approval.

CCN BACKLOG STATUS

- 1 Consultant Change Notice (CCN) is pending approval by the Change Control Review Board (CCRB) for an estimated value of \$113,000.
- No CCN's were approved by the CCRB during the period.