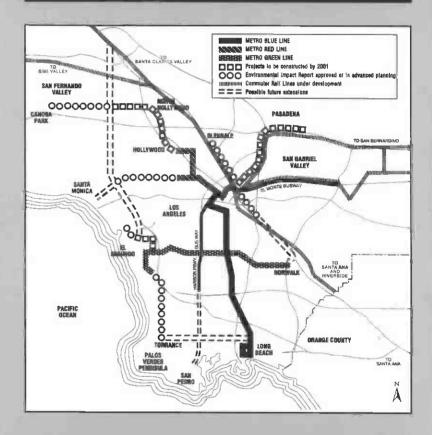
## RAIL CONSTRUCTION CORPORATION



Executive Report Rail Program Status





### RAIL PROGRAM SUMMARY STATUS

### RAIL PROGRAM STATUS SUMMARY

### PROGRAM COST STATUS

The rail design and construction program consists of four individual projects - the Metro Blue Line, the Metro Green Line, and the Metro Red Line, MOS-1 and MOS-2. The program has a combined budget of \$4,659.7 million and a combined current forecast of \$4,659.7 million.

The total number of change notices on the Metro Red Line MOS-1 increased by 95 this month while the number of unresolved change notices decreased by six. The result was a decrease in the unresolved/total change notices percentage to 24% from 25%. The total dollar value of executed change orders for the Metro Red Line MOS-1 increased by about \$4.7 million to \$56.9 million.

The total number of change notices on the Metro Blue Line increased by ten this month while the number of unresolved change notices decreased by 15. The result was a decrease in the unresolved/total change notices percentage to 2.1% from 2.7%. The total dollar value of executed change orders for the Metro Blue Line increased by about \$1.4 million to \$63.8 million.

Minor change notice activity has occurred on the Metro Red Line MOS-2 and the Metro Green Line.

Of the total forecasted program cost, approximately 53% has been committed and 42% has been expended. The program summary cost report (Figure 1) shows a more complete cost status of the program.

The total program expenditures are \$1,974.1 million. This is an increase of approximately \$34.2 million from last month. Figure 2 illustrates the major project objectives and attendant cash requirements through completion of the approved projects. This rail construction plan is based on the total cost forecast for each project.

STATUS DATE: 04/26/91

### RAIL CONSTRUCTION CORPORATION PROJECT COST REPORT - TOTAL RAIL PROGRAM SUMMARY BY COST ELEMENT

(IN THOUSANDS)

	PROJECT: R01,R23,R80,R81 TOTAL RAIL PROGRAM	(1)	(2) Budget		(4) HORIZED PENDITURE	(5) C	(6) OMMITMENTS	(7) INC	(8)	(9) EXI	(10) PENDITURES	(11) FOR	(12) RECAST
•	DESCRIPTION	ORIGINAL	CURRENT	PER100	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	CURRENT	(11-2) VARIANCE
	CONSTRUCTION	2,488,741	2,819,861	113,149	1,589,342	98,196	1,462,980	31,714	1,097,140	17,553	1,062,537	2,889,929	70,068
Figure	PROFESSIONAL SERVICES	913,373	1,116,430	11,719	574,219	22,258	719,295	8,958	613,995	8,983	643,320	1,128,357	11,927
re 1	REAL ESTATE	245,664	325,155	953	214,275	3,029	224,403	650	174,222	2,050	210,819	330,503	5,348
	UTILITY/AGENCY FORCE ACCOUNTS	112,620	114,611	0	64,652	. 664	76,764	599	65,244	911	65,008	98,864	(15,747)
	SPECIAL PROGRAMS	5,522	14,537	12	. 670	12	770	20	320	20	293	17,440	2,903
	PROJECT RESERVE	318,879	315,631	0	0	0	0	0	0	0	0	252,197	(63,434)
	PROJECT REVENUE	(18,115)	(46,503)	0	o	4,982	(766)	(284)	(6,057)	4,721	(7,860)	(57,568)	(11,065)
	GRAND TOTAL PROJECT	4,066,684	4,659,722	125,833	2,443,158	129, 141	2,483,446	41,657	1,944,864	34 238	1,974,117	4,659,722	 0

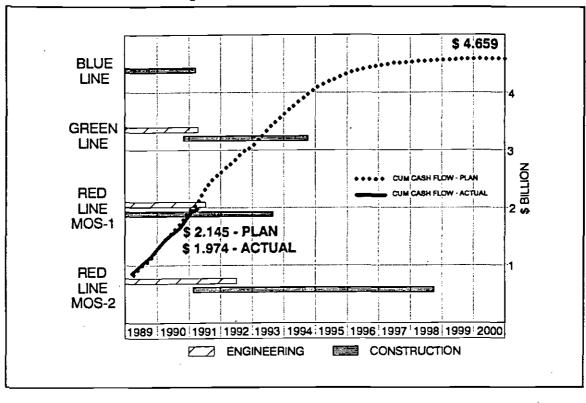


Figure 2 - Rail Construction Plan

Figure 3 shows the funding sources for each project and for the total program. Data included in this figure is based on the current forecast total cost of each project.

Figure 3 - Rail Construction Funding Sources

BASED ON PROJECT COST FORECASTS (DOLLARS IN MILLIONS)												
	BLUE	LINE	GREE	EN LN	RED	LINE IS-1		LINE S-2	TOTAL PROGRAM			
	\$	%	\$	%	\$	%	\$	%	\$	%		
UMTA					696	48	667	46	1363	29		
STATE				l i	214	15	186	13	400	9		
LOCAL (PROP A)	877	100	886	100	228	16	439	30	2430	52		
BENEFIT ASSESSMENT					130	9	58	4	188	4		
CITY OF LOS ANGELES					86	6	96	7	182	4		
UNALLOCATED FCST	,			<u>.</u>	96	6	_	:	96	2		
TOTAL 877 100 886 100 1450 100 1446 100 4659 100												

<sup>\*</sup> CONSISTS OF LIGHT RAIL LINE (\$847) AND MC-5 WORK (\$30)

<sup>\*\*</sup> LRT PORTION INCLUDED IN BLUE LINE FORECAST

16

63

79

72

### PROGRAM SCHEDULE STATUS

The Metro Blue Line is in the close-out phase.

88

106

99

90

75

66

The current forecast for the Metro Green Line Revenue Operations is March 1995. The project is 118 working days behind the target ROD of October 1994, primarily because of slippage in the contract bid and design of the Vehicle Procurement (P1900) package.

The Metro Red Line MOS-1 is scheduled to begin Revenue Operations in September This remains an achievable schedule. The critical path consists of the trackwork installation and SCADA.

The Wilshire Segment of the Metro Red Line MOS-2 is scheduled to begin Revenue Operations in July 1996, with the Vermont/Hollywood Segment scheduled for opening in September 1998. No adverse impacts to these dates are presently seen.

### **REAL ESTATE**

TOTAL

PREVIOUS

MONTH

To date, one hundred six (106) real estate parcels have been identified as required for the Metro Red Line MOS-2 and the Metro Green Line. Figure 4 summarizes the real estate status for each project.

NO. OF JUST COMP OFFERS CONDEM PARCELS PARCELS NUMBER PROJECT PARCELS **CERTIFIED** APPROVED MADE NATION AVAILABLE NOT PLAN ACTUAL PLAN ACTUAL PLAN ACTUAL PLAN ACTUAL **AVAIL** 25 37 22 GREEN 38 38 38 38 25 2 38 MOS-2 68 50 52 28 25 28 24 6 5 4

50

47

65

Figure 4 - Real Estate Acquisition Status Summary

49

47

8

42

27

27

### **ISSUES**

The RCC is actively pursuing documentation and implementation of standard policies and procedures for management of the Metro Rail construction. A Policies and Procedures consultant has been hired to support development of this process. A draft of the Program Management Policies and Procedures has been issued for final review.

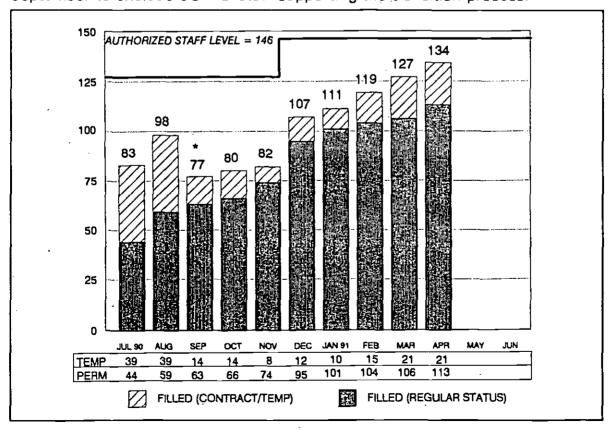
Vacant staff positions in the RCC organization are being actively recruited. Filling vacancies in Engineering and Contract Administration remain a key goal. A primary concern is that the quality of applicants for these positions has not met RCC/LACTC standards.

### RAIL CONSTRUCTION CORPORATION STAFF DEVELOPMENT

Authorized staff level for the RCC is 146 positions. Presently, 113 positions are filled with regular full time staff and 21 positions are filled with contract or temporary employees. Active recruitment continues for the remaining positions. Staff levels beginning July 1, 1990 are illustrated in Figure 5.

Figure 5 - RCC Staff Levels

\* The contract/temporary number was revised from 39 in August to 14 in September to exclude SCRTD staff supporting the transition process.



### CORPORATE COST TARGETS RELATIVE TO CONSTRUCTION

The corporate goals of the RCC include limitations on the percentage of total project costs which will be spent on project administration and on RCC/LACTC staff.

The RCC corporate goal for project administration costs is 20%. Based on the current cost forecast data for each project, the project administration cost totals 24.6% as compared to 24.3% last month. The slight increase resulted from the Metro Red Line MOS-2 activities. The percentage <u>includes</u> all costs previously expended by the SCRTD when the Metro Red Line MOS-1 project was under SCRTD management.

Staff costs are projected at 4% of total program costs which meets the established corporate goal. Figure 6 illustrates the forecast figures for each project and for total program.

#### (IN THOUSANDS)

i	METRO BLUE	TRO BLUE LINE METRO GREEN LIN			METRO RED	LINE	METRO RED	LINE	PROJECT TO	OTALS	CORPORATE
					MOS-	1	MOS-2	2			1
Į.	DOLLARS	*	DOLLARS	X	DOLLARS	×	DOLLARS	X	DOLLARS	×	GOAL
CONSTRUCTION	657,487	75%	604,709	68%	751,545	52%	975,052	67%	2,988,793	64%	
REAL ESTATE	55,592	6%	52,616	6%	139,820	10%	82,475	6%	330,503	7%	
PROFESSIONAL SERVICES:							,		ļ		
ENGINEERING/DESIGN	69,587	8%	78,470	9%	215,511	15 <b>%</b>	81,773	6%	445,341	10%	
CONSTRUCTION MGMT.	91,642	10%	50,165	6%	138,325	10%	131,056	9%	411,188	9%	
STAFF	17,655	2%	26,189	3%	107,939	7%	56,166	4%	207,949	4%	4%
OTHER	14,222	2%	7,543	1%	20,744	1%	38,810	3%	81,319	2%	
SUBTOTAL	193,106	22%	162,367	18%	482,519	33%	307,805	21%	1,145,797	25%	20%
PROJECT RESERVE	963	0%	82,934	9%	76,135	5%	92,165	<b>6%</b>	252,197	5%	
PROJECT REVENUE	(29,877)	-3%	(16,626)	-2%	0	0%	(11,065)	-1%	(57,568)	-1%	
GRAND TOTAL	877,271	100%	886,000	100%	1,450,019	100%	1,446,432	100%	4,659,722	100%	

Figure 6 - Cost Performance Relative to Corporate Goals

### **CONSTRUCTION SAFETY**

Figure 7 shows the combined Construction Safety report for the Metro Blue Line, the Metro Green Line and the Metro Red Line (MOS-1). The frequency index of accidents (Lost Time) exceeds the national average but the severity index of the accidents (Lost Days) continues to be below the national average.

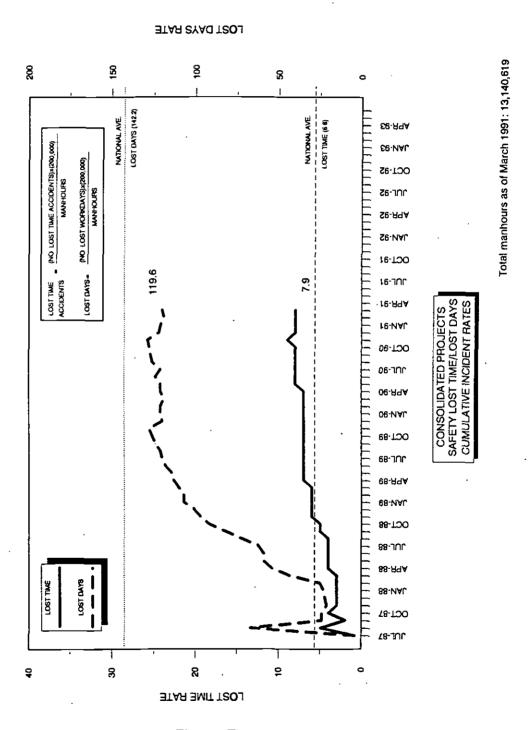
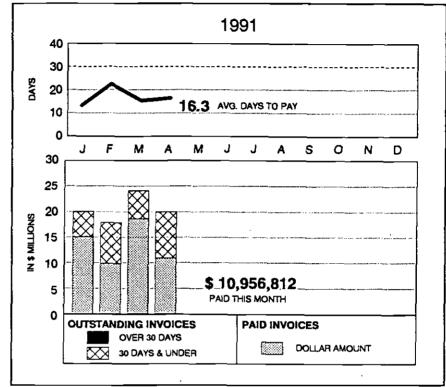


Figure 7

### **INVOICE PROCESSING**

- The average time taken to pay invoices for Construction and Procurement contracts (including Insurance) was 16.3 days.
- 38 invoices were paid this month for a total value of \$10,956,812.
- There were no outstanding Construction or Procurement invoices over 30 days old.



Note: The average days to pay is the time from when the Resident Engineer approves a progress payment (invoice) to when Accounting issues a check for this invoice.

### **OUTSTANDING INVOICES**

	Con	struction/Prod	curement Inv	oices	Other Invoices							
<b>,</b>		and Under		30 Days	30 Days	and Under	Over 3	30 Days				
1	Number of	Dollar	Number of	Dollar	Number of	Dollar	Number of	Dollar				
Month	Invoices	Value	Invoices	Value	Invoices	Invoices Value		Value				
JAN 1991	16	4,958,187	2	19,717	74	74 11,669,670		6,864,826				
FEB 1991	20	8,153,544	0	0	103	14,414,229	60	8,224,140				
MAR 1991	15	5,485,581	1	33,214	86	12,634,672	77_	6,998,877				
APR 1991	22	9,142,595	0	0	67	11,848,262	76	8,959,658				
								1				
ł	1											

### **COMMUTER RAIL**

### **SUMMARY**

The RCC System Engineering (Vehicles) group is providing commercial and technical management to the Commuter Rail program for rolling stock. This includes procurement management, administration, engineering, inspection, testing, and warranty services. There are two contracts in place for rolling stock: bi-level passenger vehicles and locomotives. These contracts are in the initial design phase. One additional contract is in process for technical support services and assistance during the 2 year procurement and vehicle commissioning process.

The Revenue Operation Date is set for the fourth quarter 1992.

### CONTRACT DESCRIPTION

### BI-LEVEL PASSENGER VEHICLES

Contractor:

UTDC Corporation, Canada

Contract NTP:

January 23, 1991

Contract Value:

\$ 51,542,500 (Base Buy)

\$ 51,016,000 (Option Buy, if exercised before 7-23-91)

Quantity:

40 vehicles - base (25 trailers/15 cabs)

40 vehicles - option (28 trailers/12 cabs)

Delivery:

Car #1 (Base) - January 1992 Car #40 (Base) - June 1992 Option cars - To be Determined

### LOCOMOTIVES, DIESEL-ELECTRIC

Contractor:

Electro-Motive Division - GM, Canada

Contract NTP:

January 23, 1991

Contract Value:

\$ 34,305,922 (Base Buy)

\$ 20,950,000 (Option Buy, if exercised before 5-23-91)

Quantity:

17 Locomotives - base

10 Locomotives - option

Delivery:

Locomotive #1 (Base) - June 1992

Locomotive #17 (Base) - September 1992 Option locomotives - To be Determined

### TECHNICAL SUPPORT SERVICES

Contractor:

LTK Engineering Services

Contract NTP:

April 12, 1991

Contract Value:

\$ 1,147,269

### COMMUTER RAIL (CONT'D)

### **AREAS OF CONCERN**

<u>NEW</u>

**April 1991** 

Compliance with Disabilities Act (ADA) Accessibility Guidelines

Concern:

The initial design of the passenger vehicles do not include features

which meet the latest ADA requirements.

Action:

The vendor (UTDC) will review and assess impacts on design,

cost and schedule. UTDC's review results are due by the end of

May 1991.

### SCHEDULE OF PAYMENTS

YEAR / QTR	UTDC PLAN ACTUAL		PLAN PLAN	D-GM ACTUAL	TOTAL Plan	PROJECT ACTUAL	VARIANCE (PLAN-ACTUAL)
FY91 / 1	11,597,062	11,597,062	13,722,369	13,722,369	25,319,431	25,319,431	0
FY91 / 2	0	o	0	0	0	o	0
FY91 / 3	6,958,238	0	8,576,480	0	15,534,718	0	
FY91 / 4	4,092,075	0	0	0	4,092,075	0	
TOTAL FY91	22,647,375	11,597,062	22,298,849	13,722,369	44,946,224	25,319,431	0
FY92 / 1	10,384,358	0	8,576,481	0	18,960,839	0	
FY92 / 2	10,003,205	0	0	o	10,003,205	o	•
FY92 / 3	8,456,020	0	1,816,196	0	10,272,216	0	
FY92 / 4	o	o	1,614,396	0	1,614,396	o	
TOTAL FY92	28,843,583	0	12,007,073	0	40,850,656	0	
FY94 / 4 RETENTION	51,542	. 0	0	. 0	51,542	0.	
TOTAL PROJECT	51,542,500	11,597,062	34,305,922	13,722,369	85,848,422	25,319,431	0

### **EXECUTIVE SUMMARY**

#### **COST STATUS**

The current Project Budget and Project Forecast is \$877,271,000. This figure includes the MC-5 contracts valued at \$30,322,000.

Costs totalling \$809,879,592 (92% of the budget) have been incurred to date and \$840,666,174 (96% of the budget) have been committed through the same time period.

#### SCHEDULE STATUS

Construction progress was measured at 99.99% compared to the planned progress of 99.99%

### **AREAS OF CONCERN**

### <u>ONGOING</u>

January 1991

TVM Reliability

Concern:

The Ticket Vending Machines are experiencing breakdowns in

excess of desired goals.

Action:

To improve TVM reliability and performance through closer

supervision.

Status:

Vendor has instituted a monitoring program to insure that the reliability improvement program is kept on schedule. There have

been significant improvements achieved in recent weeks (see page 10, the Weekly TVM Reliability Report for weeks 13 through 16).

### **DBE & WBE PARTICIPATION**

As of March 1991, 19.29% DBE and 8.85% WBE (28.14% total) participation levels were achieved, which continues to surpass the established goal of 23%.

METRO BLUE LINE

### **KEY ACTIVITIES - APRIL**

- Maintained cost data base and prepared status report.
- Completed close-out of Contracts C117, C335, C415, C420, H836, and P830.

### **KEY ACTIVITIES - PLANNED FOR MAY**

- Maintain cost data base and prepare status report.
- Coordinate close-out of Contracts H825, C140, H811, H812, P822 and P852.
- Coordinate transfer of Contracts H831, H832 and H840 to Metro Green Line.
- Coordinate transfer of Contracts C4710 and C355R to SCRTD.

STATUS DATE: 04/26/91

## RAIL CONSTRUCTION CORPORATION PROJECT COST REPORT - METRO BLUE LINE (LIGHT RAIL PORTION) SUMMARY BY COST ELEMENT (IN THOUSANDS)

PROJECT: RO1	(1)	(2)	(3)	(4) THOR1ZED	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
METRO BLUE LINE		SUDGET		XPENDITURE	co	MMITMENTS	INC	URREO COST	EXF	ENDITURES	FO	RECAST
DESCRIPTION	ORIGINAL	CURRENT	PER100	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	PER 100	TO DATE	CURRENT	(11-2) VARIANCE
CONSTRUCTION	497,194	578,894	0	569,757	8,086	549,697	12,802	528,822	6,193	519,344	580,144	1,250
PROFESSIONAL SERVICES	121,494	183,458	0	164,821	447	180,173	447	180,171	447	177,771	183,458	0
REAL ESTATE	39,847	52,065	o	49,463	(222)	48,509	(222)	47,744	(222)	47,654	52,065	0
UTILITY/AGENCY FORCE ACCOUNTS	50,177	47,378	o	44,434	53	58,262	86	55,210	290	54,690	47,378	0
SPECIAL PROGRAMS	0	2,728	0	0	o	0	0	0	0	0	2,728	. 0
PROJECT RESERVE	64,129	1,713	0	0	0	0	0	0 .	0	0	463	(1,250)
PROJECT REVENUE	(1,489)	(19,287)	0	o	0	444	(261)	(3,497)	(261)	(3,497)	(19,287)	0
GRANO TOTAL PROJECT	771,352	846,949	0	828,475	8,364	837,085	12,852	808,450	6,447	795,962	846,949	0

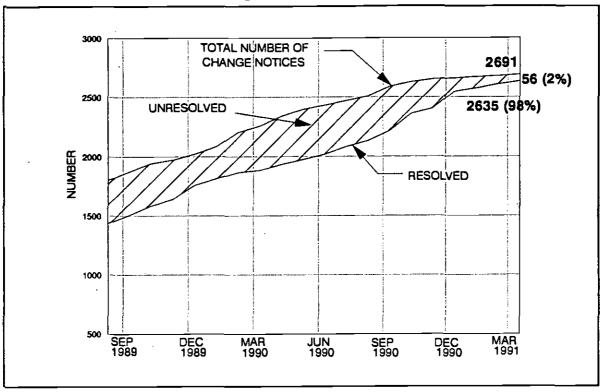
STATUS DATE: 04/26/91

## RAIL CONSTRUCTION CORPORATION PROJECT COST REPORT - METRO BLUE LINE (MC5 PORTION) SUMMARY BY COST ELEMENT (IN THOUSANDS)

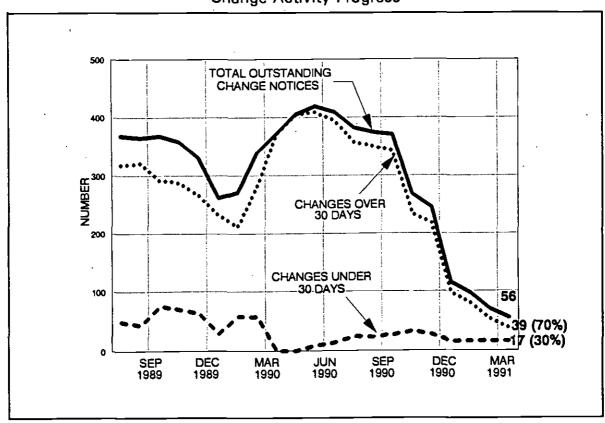
PROJECT: RH1	(1)	(2)	. (3) Tua	(4) HORIZED	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
MC5 RR RELOC.		8U/DGET	FOR EX	(PEND LTURE	C	OMMETMENTS	INC	CURRED COST	EX	PENDITURES	FO	RECAST
DESCRIPTION	ORIGINAL	CURRENT	PERTOO	TO DATE	PERIOD	TO DATE	PER100	TO DATE	PERI OO	TO DATE	CURRENT	(11-2) VARIANCE
CONSTRUCTION	0	29,965	0	. 3,224	0	3,330	107	3,304	0	3,197	29,965	0
PROFESSIONAL SERVICES	o	3,320	0	0	0	29	0	29	0	0	3,320	0
REAL ESTATE	0	3,527	o	0	222	222	222	222	222	222	3,527	0
UTILITY/AGENCY FORCE ACCOUNTS	0	0	0	. 0	0	0	0	0	0	0	0	0
SPECIAL PROGRAMS	0	3,600	0	0	o	0	0	0	0	0	3,600	0
PROJECT RESERVE	0	500	0	0	o	0	0	0	0	0	500	0
PROJECT REVENUE	0	(10,590)	0	o	0	o	0	(2,126)	0	(2,126)	(10,590)	0
GRAND TOTAL PROJECT	0	30,322	0	3,224	222	3,581	329	1,429	222	1,293	30,322	0

Page 5

Change Notice Resolution

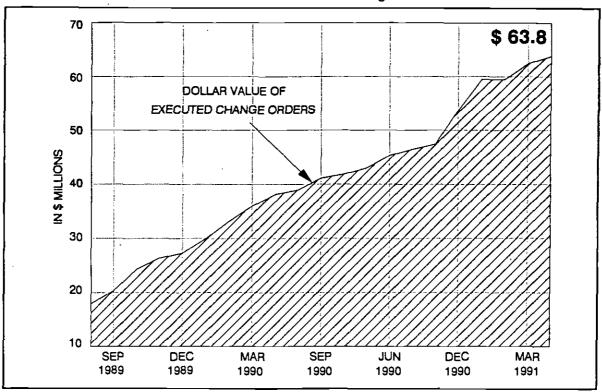


**Change Activity Progress** 

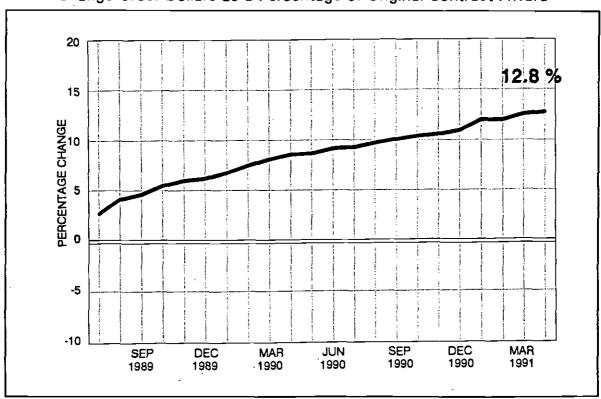


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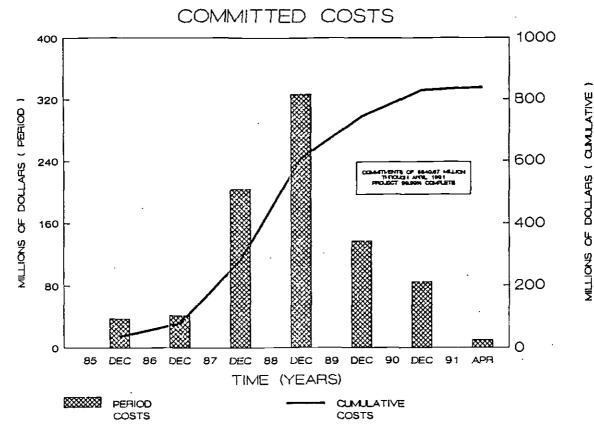
Total Value of Executed Change Orders



Change Order Dollars as a Percentage of Original Contract Award



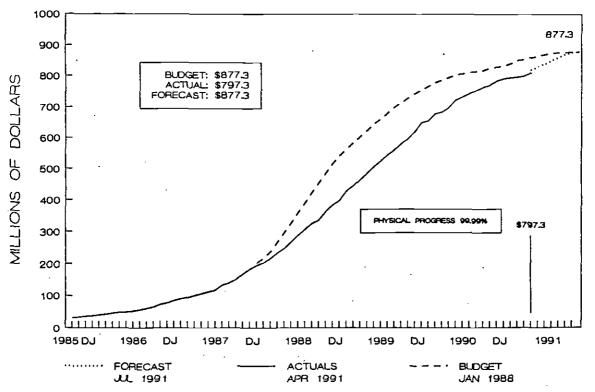
### METRO BLUE LINE



FIRST TWO YEARS SHOW ACTUAL DOLLARS INCURRED DURING THE DESIGN STAGE

### METRO BLUE LINE

CASH FLOW PROJECTION



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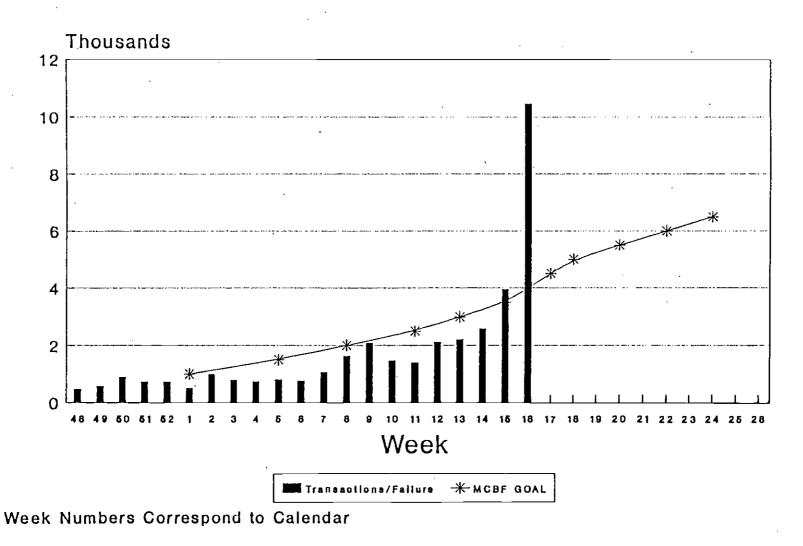
**LEGEND** 

0	Open. Action still required.
	Completed or Not Applicable

## CONTRACT CLOSE OUT STATUS METRO BLUE LINE

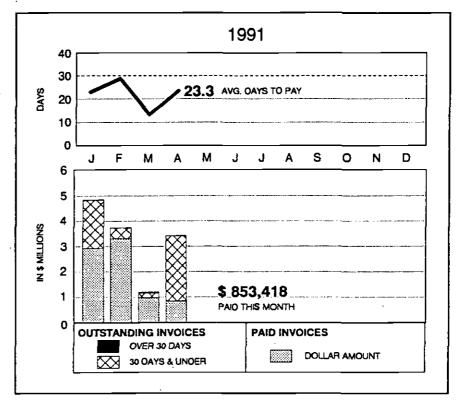
				E OUT STA	TUS		<u> </u> -	
CONTRACT NUMBER	DESCRIPTION	CLAIMS/ CHANGE ORDERS	FINAL PROG. PAYMENT	FINAL RELEASE	FINAL ACCEPT. CERTIF.	EQUIP. FINAL DELIV.	COMMENTS	PROJECTE CLOSE-OU DATE
C117	Flower Street Subway						Detivered	
C265	Station Super & Corridor						Delivered	
C275	Mid Corridor Landscaping						Delivered	
C3270	Long Beach Loop						Delivered	
C335	LB Station Super Structure						Delivered	
C415	Firestone Bridge						Delivered	
C420	MC5 Rosecrans Utility Reloc.						Delivered	
H836	Safety & Security Comm Sys						Delivered	
H860	Graphics & Signs						Delivered	
P830	Special Trackwork						Delivered	
H825	Signalling & Train Control						Delivered	
C140	LACBD Approach	0	0	0	0		RCC to decide on CO #134 & #156	22-Apr-9
H831	SCADA	0	0	0	0		Contract to be transferred to OKA (Green)	06-May-9
H832	Cable Transmission (CTS)	0	О	0	0		Contract to be transferred to OKA (Green)	06-May-9
H840	Fare Collection		0_	0	0	0	Contract to be transferred to OKA (Green)	20-May-9
P822	Concrete Ties	0	0	0	0		Further tests reqd. (Orig. closeout: 22-Apr)	10-Jun-9
P851	Hi-Rail Trucks	0	0	0	0		Back charges under dispute (Orig.: 06-May)	10-Jun-9
P852	Re-Railing Truck, Car Mover	0	0	0	0	0	Added work from P851 (Orig. closeout; 22-Ju	10-Jun-9
C4710	Misc. Construction	0	0	0	0	0	Work in progress (Orig. closeout: 10-Jun)	24-Jun-9
H811	TPSS	0	0	0	0		(Orig. closeout: 06-May)	24-Jun-9
H812	ocs	0	0	0	0		(Orig. closeout: 06-May)	24-Jun-9
C355	Long Beach Landscaping	0	0	0	0		Work in progress	Sep-9

# Weekly TVM Reliability Report Maintenance-CDCS Data



### **INVOICE PROCESSING**

- The average time taken to pay invoices for Construction and Procurement contracts (including Insurance) was 23.3 days.
- 12 invoices were paid this month for a total value of \$853,418.
- A single outstanding Construction/ Procurement invoice over 30 days old for \$33,214 was paid this month. This was the primary cause for a higher average days to pay number than last month.



Note: The average days to pay is the time from when the Resident Engineer approves a progress payment (invoice) to when Accounting issues a check for this invoice.

### **OUTSTANDING INVOICES**

	Con	struction/Prod	curement Inv	- <del>-</del>	Other I	nvoices		
İ	30 Days	and Under	Over	30 Days	30 Days	and Under	Over	30 Days
	Number of Dollar		Number of	Dollar	Number of	Dollar	Number of	Dollar
Month	Invoices	Value	Invoices	Value	Invoices Value		Invoices	Value
JAN 1991	10 1,903,745		2	2 19,717		2,246,267	33	5,057,491
FEB 1991	3	433,701	0	0	55	3,027,168	35	5,065,440
MAR 1991	3	184,850	1	.33,214	31	3,797,456	54	5,579,849
APR 1991	9	2,575,498	0	0	24	1,638,117	60	6,277,732
		•	1					
	1 1		1		!		1	

### **EXECUTIVE SUMMARY**

### **COST STATUS**

The total project budget is \$886 million. The cashflow information reflects a total project expenditure of \$73.8 million, representing approximately 8% of the current total dollars. To date the project commitments are \$158.6 million, approximately 18% of the total budget.

### **SCHEDULE STATUS**

The April 1991 update of the Master schedule indicates that the project is 118 working days behind the target revenue operations date (ROD) of October 1994. The current Forecast ROD for the project is March 1995.

The critical path runs through Contract P1900, vehicle procurement. The secondary critical path runs through the El Segundo Segment Contracts C0101, Utility Relocation and Foundations; C0110 Segmental Bridges; C0610, Trackwork Installation; H1400, Overhead Contact System; H1100 Automatic Train Control.

A meeting was held with the RCC regarding the hazardous waste issues in the Hawthorne Yard and Shop site.

The time required for the Hawthorne site hazardous Waste Clean-up has the potential to make construction of the Hawthorne Yard & Shops a critical path activity.

#### PROFESSIONAL SERVICES

LT Klauder is reviewing the P1900, High Performance Transit Vehicle procurement proposal(s) that were received April 17, 1991. It is anticipated that the internal review by LTK will be complete mid May 1991.

O'Brien Krietzberg's field office was temporarily relocated to the third floor of the KilroyAirport Center building and currently 32 project staff occupy these offices. It is anticipated that the permanent field office will be moved to the sixth floor of the Kilroy Airport Center building in July, 1991.

### REALSTATE

Real Estate Right of Entry continues to keep pace with construction. However access to Southern California Edison and TRW properties is becoming critical.

### CONSTRUCTION/ PROCUREMENT

Of the four civil construction contracts in the El Segundo segment, contract is in the construction phase, Contract C0110 is in the contractor's mobilization stage, Contract C0110 has been recommended for award and is under protest, and bid opening on Contract C0400 contract has been postponed pending resolution of hazardous waste contamination. All civil contracts for the North Coast extension are currently in the design stage. Of the 12 major I-105 freeway construction contracts required for LRT facilities, nine are currently under construction, 2 have been awarded and one is in the design stage.

### **AREAS OF CONCERN**

### **ONGOING**

1. March 1991 Third Party Issues

Concern: The relocation of oil lines belonging to Chevron (south of Rosecrans Avenue)

could impact construction of Contracts C0101, C0100 and C0110.

Action: The Chevron oil lines must be relocated by the end of June in order to avoid

delays on the current construction schedule.

Status: Meetings have been held with Chevron management to expedite the

completion of the oil lines relocation. Following the RCC's April authorization, Chevron commenced negotiations with a contractor to complete this work. The present schedule for completing this work reflects a 7-8 week potential impact to the C0110 Contract, with additional impacts to the C0101 contract's schedule. To date the RCC's efforts and actions have reduced the potential impact by 6-8 weeks. Additional actions and alternatives to further accelerate this work and reduce potential impacts is being studied by both the RCC and

OKA.

### 2. June 1991 Caltrans Rail Access Dates

Concern: Century Freeway construction continues to slip without any change in rail

construction access dates by Caltrans to accommodate the slippage or any

suggested methods of acceleration to compensate for slippage.

Action: It is necessary to solidify the Century Freeway with any suggested methods of

access dates so that the systems installation schedule can be finalized. Once this has been accomplished, the schedule specifications for the systems

contracts can be updated to reflect the current dates.

Status: The OKA task force continues to discuss the projected rail access and light

rail construction issues with Caltrans. Regular meetings are held with Caltrans design, project control and field personnel in an attempt to identify accurate access dates. After the dates have been agreed upon by Caltrans and the Metro Green Line staff, an analysis will take place to determine the effect on

the overall project schedule.

### 3. Jan. 1991 Kramer Property Hazardous Waste

Concern: It is not yet determined what impact the treatment of Kramer property

hazardous waste material will have on SCE utility relocations or on the Kramer

Bridge construction.

Action: The method of construction and the handling of the hazardous waste material

located on the Kramer property must be approved by the Department of Health Services (DHS) before construction on the Kramer property can commence. The necessary language to cover the handling of the hazardous waste material

is being prepared or provided by the RCC.

Status: The DHS is processing for the approval of this matter with a May /June permit

issuance anticipated.

### 4. Nov. 1990 Vehicle Delivery Schedule

Concern: When the baseline Project Master Schedule, was established in December

1989, the delivery date for the first Light Rail Vehicle (LRV) was December 1992. Delivery has since been delayed until September 1993, a schedule slippage of approximately nine months. The delay is due to design evolution and extension of bid response time requested by prospective bidders. Although workarounds in the schedule have been incorporated to absorb four months

of the slippage, the remaining time has pushed the critical path to reflect a

forecast project completion date of March 22, 1995, 118 days behind schedule. Under the current scenario, if the October 1994 ROD is to be maintained, the current vehicle delivery schedule would allow approximately two months for overall systems testing and integration. This may not be sufficient time to fully test and commission a driverless, automatic train control system. The baseline schedule allowed seven months for the overall systems testing and integration portion of the project. Seven months is the anticipated minimum amount of time required to complete these tasks.

Action:

The vehicle delivery schedule must be determined and the impact of this schedule on the overall Project Master Schedule must be analyzed.

Status:

Proposals for P1900, High Performance Transit Vehicles were received April 17, 1991. These proposals are being reviewed by LTK and the RCC staff. This review is scheduled to be complete by mid-May 1991. At that time, negotiations with the proposers will begin to determine contract pricing and vehicle delivery schedule.

### 5. June 1990 Transcal II Design Packages

Concern:

Transcal II has developed an in-house Century Freeway design package priority list. Transcal's intent was to create a sense of urgency for the production of the design supporting Caltrans construction projects. A number of final submittals require revisions and are currently behind schedule which is impacting the construction needs of Caltrans projects.

Action:

Century Freeway light rail final design by Transcal II must be expedited to accurately incorporate all design changes in a time frame that will support current construction and change order negotiations.

Status:

Action:

An iterative review process to eliminate errors and inconsistencies in the design packages and delay in obtaining the engineer's estimate are delaying construction.

### 6. Dec. 1990 Hawthorne Yard & Shop Hazardous Waste

Concern: RCC needs to provide identification, quantification, abatement and/or clean-up of Hazardous Waste.

Clean-up of Flazardous Waste

RCC/OKA will approach SBAQMD to present the findings to date and to begin negotiations to identify and quantify clean-up requirements. Once RCC decides the direction the appropriate new bid or addendum packages will issued.

Status:

On April 2, 1991, OKA presented an Implementation Plan for Environmental Audit /Assessment and Asbestos Investigation for the Hawthorne Yard and Shop - Green Line contract No. R23-T02-C0400. Based on the presentation, RCC authorized OKA to implement the plan and perform further investigation of the site. On April 24, 1991, OKA presented an Environmental Audit Report to the RCC. This report identified, quantified, and recommended abatement and/ or clean-up procedures for contaminants that include asbestos, PCB's and hydrocarbons.

RCC staff is reviewing the possibility of preparing, bidding and awarding an abatement/clean-up package to address hazardous waste prior to mobilization of the C0400 Contractor. On a parallel path OKA/ TRANSCAL is modifying the language in the Environmental Audit Report to include same as a possible addendum to C0400. RCC will decide the ultimate approach based on both cost and time impacts.

### **KEY ACTIVITIES - For the Month of April**

- Contract C0100 bids were opened and the award to Kiewit Pacific is under protest.
- Contract C0110 NTP was issued on April 1, 1991.
- Contract C0400 award on hold due to hazardous waste issues.
- Contract H1100 Proposal cutoff date was extended by one month to June 12, 1991.
- Contract P1900 Proposals were received on April 17 and are under review.
- Contract H1200 Proposals were received on April 2, and are under review.

### **KEY ACTIVITIES - Planned for the Month of May**

- Contract C0100 review of the bid protest may be completed.
- Contract P1800 proposals are due on May 1, 1991. Bid report to complete on May 23, 1991.
- Contract C1001 will be advertised on May 15, 1991.
- Contract C0400 RCC to give specific direction regarding the hazardous waste abatement scope.
- Chevron oil lines recolation to start during May 1991.

### FUND SOURCE STATUS (IN THOUSANDS OF DOLLARS)

STATUS: 04/26/91

	TOTAL ANTICIPATED	TOTAL FUNDS	OBLIGAT	TONS	EXPENDE	TURES	BILLED TO SOURCE		
SOURCE	FUNDS	RECEIVED	\$	%	\$	%	\$	%	
PROP 108	107,500	0	0	0%	0	0%	0	0%	
TCI	36,000	0	0	0%	0	0%	0	0%	
PROP A	742,500	73,772	155,206	21%	73,772	10%	73,772	10%	
TOTAL	886,000	73,772	155,206	18%	73,772	8%	73,772	8%	

Page: 1 Report Date: 05/06/91 Status Date: 04/26/91

O'BRIEN-KREITZBERG

CRE Project: R23 Period: 3/30/90 to 4/26/91

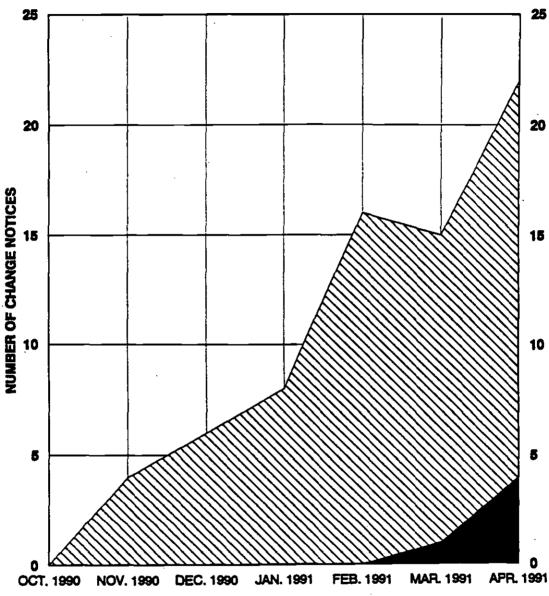
### RAIL CONSTRUCTION CORPORATION NETRO GREEN LINE Project Cost by Element

( \$ x 000's ]

		····· Budge	ıt	Autho	rized enditure -	Count to	marnits	Incurred	Cost	Expend	itures	Current	
	Description	Original [1]	<u>Ovrrent</u> (2)	Per jos	To Date	Period (5)	To Pete	Period (7)	To Date	Period	<u>To Date</u> [10]	Forecast (11)	Variance (11-2)
T	Construction	404,267	587,519	25,355	51,806	4,081	\$1,025	1,658	23,080	1,383	18, 147	588, 399	680
	Professional Services	110,295	159, 196	11,607	44,301	1,603	83,256	2,614	52,247	2,953	46,024	159,296	100
	Real Estate	35,096	49,916	0	10,759	200	21,007	200	9,487	199	9,485	52,616	2,700
•	Utility/Agency Force Accounts	7,656	16,310	0	7,091	445	4,266	15	413	15	549	16,310	. 0
D	Special Programs	2,530	5,217	. 0	0	0	100	0	80	0	0	3,071	(2,146)
c	Project Reserve	55,762	84,468	0	0	0	0	0	0	0	0	82,934	(1,534)
A	Project Revenue	(16,626)	(16,626)	0	0	(23)	(1,101)	(23)	(434)	(23)	(434)	(16,626)	0
	Project Grand Total 1	599,000	866,000	36,962	113,956	6,307	158,554	4,464	84,873	4,528	73,772	886,000	0 .

NOTE: REFER TO APPENDIX FOR REPORT DEFINITIONS

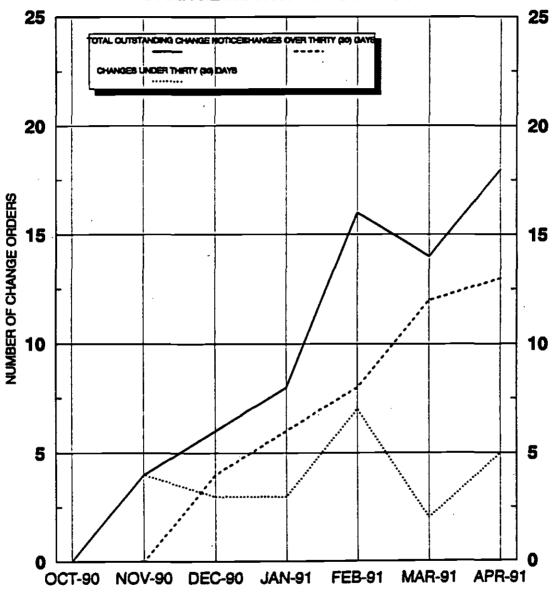




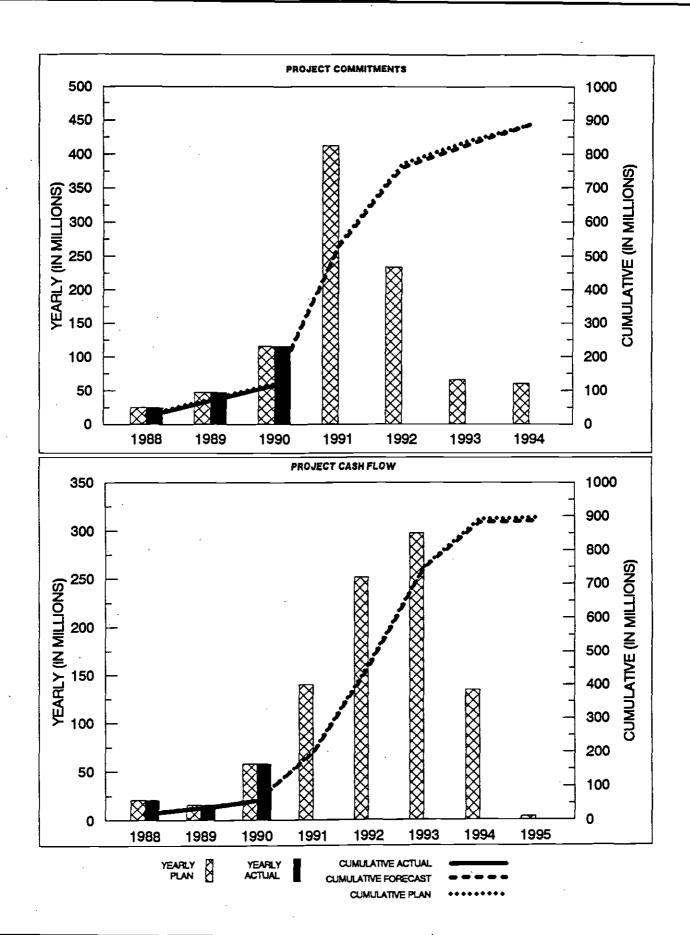
RESOLVED TOTAL NUMBER OF CHANGES

FROM THE TWENTY (20) ACTIVE CHANGE NOTICES SIXTEEN (18) ARE FROM CONTRACT C0101, ONE (1) FROM CONTRACT C0110, AND THREE (3) FROM H0832.

## CONSTRUCTION/PROCUREMENT CONTRACT CHANGES CHANGE ACTIVITY PROGRESS

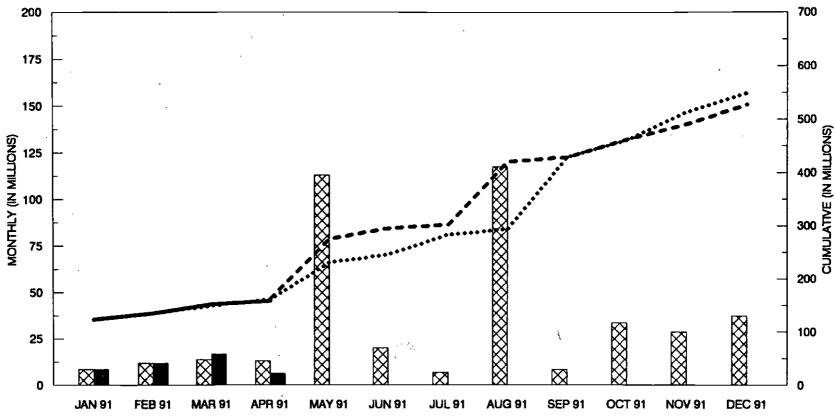


- 3 Change Notices Awalting data from Transcal
- 4 Change Notices Converted to Change Orders (awaiting packages from OKA field office)
- 6 Change Notices Walting for hazardous language from RCC
- 1 Change Notice Waiting for schedule information
- 2 Change Notices Awalting LACTC Board approval
- 3 Cost Plus Change Notices Work incomplete



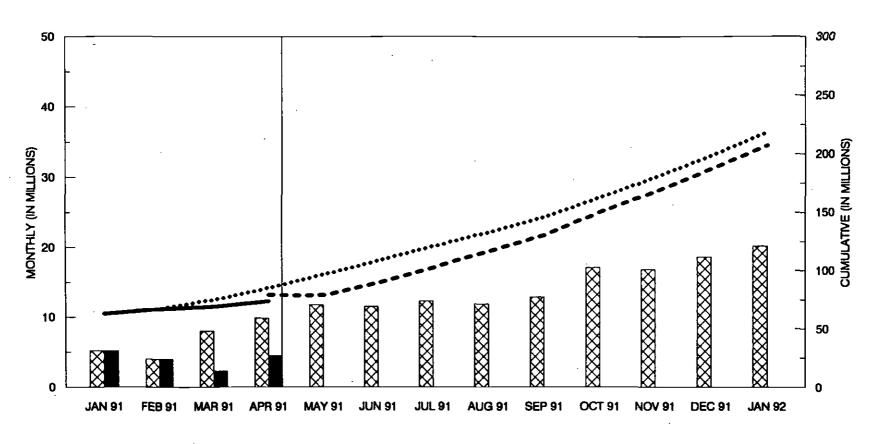
**APRIL** 1991





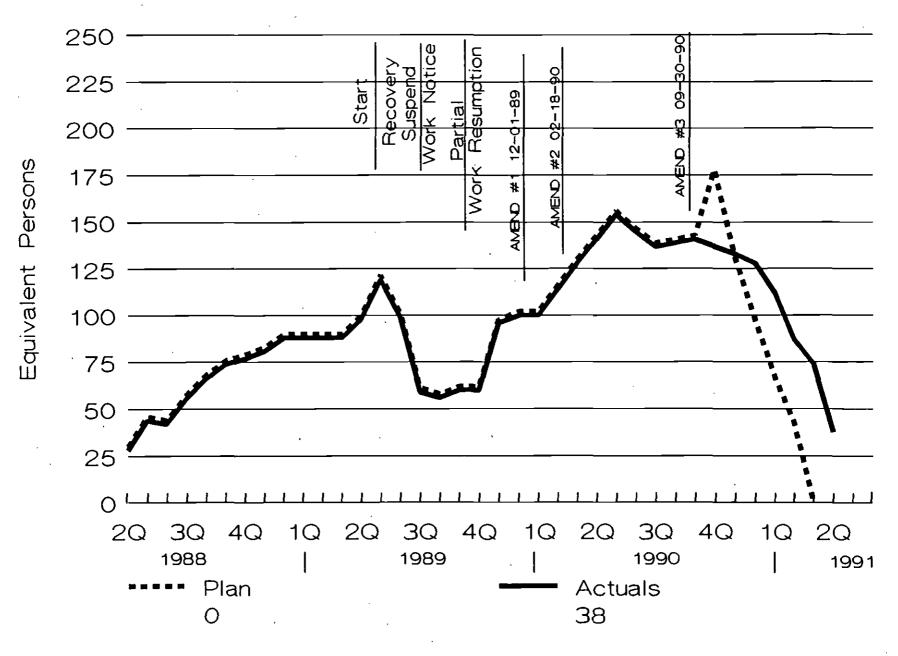
MONTHLY PLAN MONTHLY ACTUAL CUMULATIVE ACTUAL **CUMULATIVE PLAN CUMULATIVE FORECAST** 

### **PROJECT CASH FLOW**

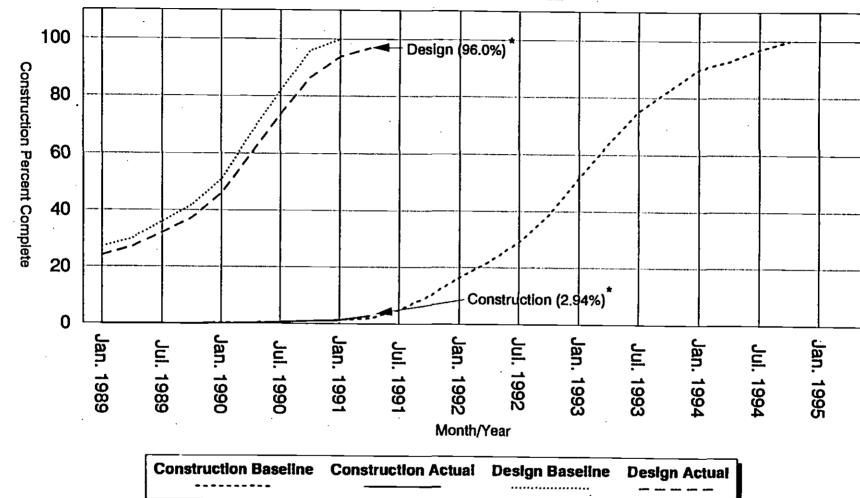


MONTHLY PLAN MONTHLY ACTUAL CUMULATIVE ACTUAL CUMULATIVE FORECAST CUMULATIVE PLAN

## NORWALK - EL SEGUNDO DESIGN SERVICES STAFFING PLAN

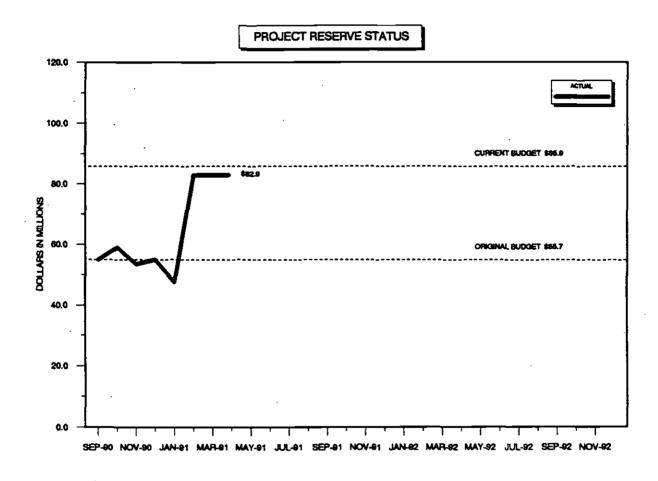


# RAIL CONSTRUCTION CORPORATION METRO GREEN LINE EXECUTIVE SUMMARY SCHEDULE



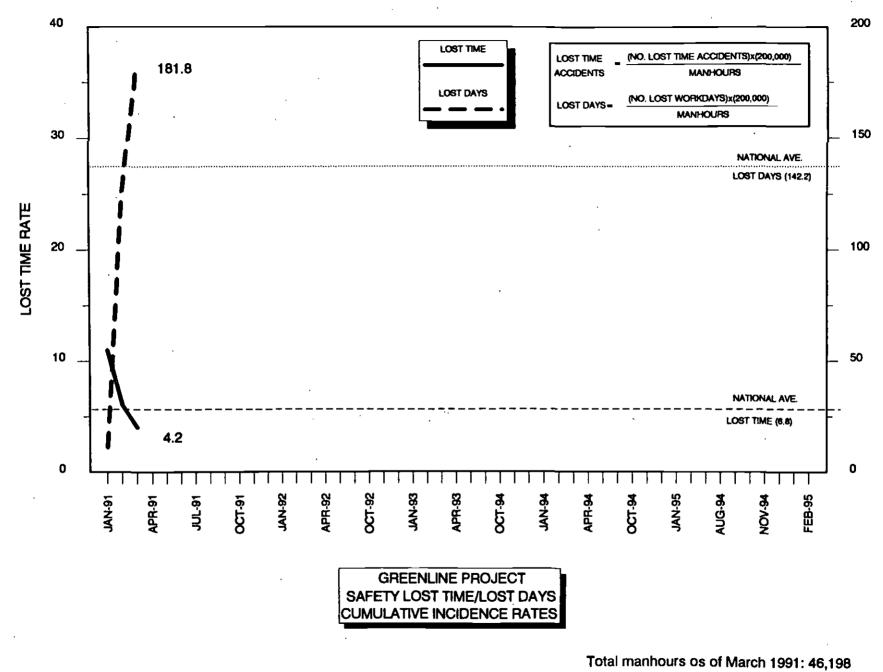
\* Excludes North Coast Extension

Data Date: 26 APR 91









### REAL ESTATE - STATUS SUMMARY

CCU	NO. OF PARCELS		IMBER JUST COMP APPROVED					CONDEM-PARCELS NATION AVAIL **			PARCELS NOT AVAIL	CONSTRUCT NTP DATE		
		PLAN	ACTUAL	FLAN	ACTUAL	PLAN	ACTUAL	FLAN	ACTUAL		FLAN	ACTUAL		
C0100	10	10	10	10	3	9	3	9	0	2	10	1	9	06/05/91
C0101	18*	18	18	18	18	18	18	18	17	0	18	17*	1	11/26/91
C0110	6	6	6	6	2	6	2	6	2	0	6	2	4	04/01/91
C0400	4	4	4	4	2	4	2	4	2	0	4	2	2	07/18/91
TOTAL	38	38	38	38	25	37	25	37	21	2	38	22	16	

### NOTE:

- \* Number includes Exhibits A and B Railroad agreements.
- \*\* Includes right-of-entry to parcels

C0100 - Cert# 542 added.

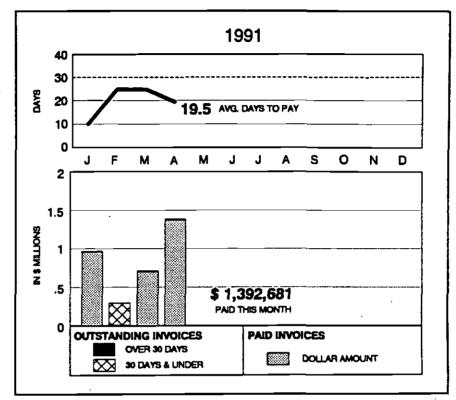
C0101/C0110 - Right-Of-Entry to TRW property has been granted for construction staging and storage only and is therefore being classified as not available.

C0100 - Cert #'s 540 and 541 added

C0400 - NTP date shown currently proposed date.

### **INVOICE PROCESSING**

- The average time taken to pay invoices for Construction and Procurement contracts (including Insurance) was 19.5 days.
- 5 invoices were processed for a total value of \$1,392,681.
- There were no outstanding Construction or Procurement invoices over 30 days old.



Note: The average days to pay is the time from when the Resident Engineer approves a progress payment (invoice) to when Accounting issues a check for this invoice.

### **OUTSTANDING INVOICES**

	Con	struction/Prod	curement Inv	oices	Other Invoices							
	30 Days	and Under	Over 3	30 Days	30 Days	and Under	Over 30 Days					
	Number of	Dollar	Number of	Dollar	Number of	Dollar	Number of	Dollar				
Month	Invoices	Value	Invoices	Value	Invoices	Value	Invoices	Value				
JAN 1991	1	8,737	0	0	9	2,811,699	2	8,152				
FEB 1991	1	296,928	i ol	0	[ 11 ]	1,586,103	2	8,152				
MAR 1991	1 1	10,126	0	0	7	2,638,217	2	8,152				
APR 1991	1	11,840	0	0	14	2,731,169	1	2,778				
			1		<u> </u>	_						

### **EXECUTIVE SUMMARY**

#### **COST STATUS**

The original Baseline Budget for the Project is \$1.25 billion. The Current Approved Budget (based on the December 1990 forecast) is \$1.45 billion. The April forecast is also \$1.45 billion.

The Project commitments to date are \$1.161 million, or 80% of the total forecast. The cash flow plan reflects a total Project expenditure to date of \$1.022 million, or 70% of the total forecast. Incurred costs to the Project are \$1.050 million, or 72% of the total forecast.

### **SCHEDULE STATUS**

The overall duration of MOS-1 as indicated in the current Project schedule remains unchanged at 84 months to reflect a revenue operation date (ROD) of September 1993. Value of work in place as of April 26, 1991, is 78% (actual) versus 80% (current plan) planned.

The Project now has two major critical paths. The first major critical path is Contract A610 trackwork installation through the AL tunnel. The second major critical path is through the SCADA portion of Contract A640:

#### PROFESSIONAL SERVICES

Primary work efforts in April were directed at resolving design misalignment at interfaces for all Stage II contracts, integrating a full range of testing activities into the Project schedule, and monitoring the application of approved grouting materials throughout the system.

### REAL ESTATE

All of the real estate required for MOS-1 construction is available under ownership by the Rapid Transit District or under a right-of-entry. Currently, 14 parcels are in the acquisition process.

### CONSTRUCTION/PROCUREMENT

During April, the A610 contractor turned over the AR tunnel to the A620 followon contractor. Contract A620 started installing the 34.5 KVA conduit from the portal to Union Station. Yard remediation work continued, and rework commenced on the walkway in the Contract A146, Line Section 5th/Hill to 7th/Flower, tunnel.

### AREAS OF CONCERN

#### **ONGOING**

August 1990 Contract A650, Vehicles (Booz Allen Hamilton)

Concern: A potential 5 1/2 month late delivery to the Transportation Test

Center (TTC) in Pueblo, Colorado, of the one paired set of vehicles required for testing could impact the system testing

and the Project critical path.

Action: The Rail Construction Corporation (RCC) has developed a plan

which would alter vehicle testing sequence at the TTC to release the first pair of vehicles directly to Los Angeles by the dates required to support systems testing. Other measures are

also being considered by the RCC.

Status: The current forecast is an August 1991 shipment of one paired

set of vehicles to Pueblo, Colorado and delivery of one paired set of vehicles to Los Angeles in January 1992. The Resident Engineer is currently in Italy observing the first powering-up of

the Red Line vehicles.

February 1991 Contract A640, Communications

Concern: Completion of the design review of the technical proposal

submitted by the A640 contractor, Bechtel, for the Rail Control Center relocation to the Central Control Maintenance Facility (A640-C0-025) is behind schedule. The schedule for the relocation requires re-engineering and equipment orders to

begin in April.

Delay is impacting the Contract A640 schedule and the overall

MOS-1 Project schedule could be affected.

Action: Completion of MRTC's review is required before further action

can be taken.

### AREAS OF CONCERN (CON'T)

Status:

Review meetings and clarification work continued in April. A meeting is scheduled May 2, 1991, with MRTC, Bechtel and subcontractors to review the revised technical provisions.

March 1991

Contract A620, Automatic Train Control Contract A650, Passenger Vehicles

Concern:

Parsons-Dillingham is unable to complete the procurement and installation of signalling equipment in the stations. Booz Allen Hamilton must finalize the design and engineering details with BREDA as quickly as possible in order to avoid an impact to the

Project schedule.

Action:

The RCC is working with Booz Allen Hamilton to expedite

turnover of the required engineering details.

Status:

The A620/A650 program station stop design has not been In order to mitigate negative impacts the cable requirements have been released for purchase. A potential cost

increase has been identified.

NEW

April 1991

Contract A187, Wilshire/Alvarado, Stage II

Concern:

The final design details are needed for CN-249, plenum enclosures and metal ceiling. This is causing a delay to the job completion milestone date and a potential cost increase to the contract.

Action:

MRTC will provide resolution of design issue.

Status:

Design resolution due May 6, 1991.

### UMTA PROJECT MANAGEMENT OVERSIGHT CONSULTANT ITEMS FOR RCC ACTION

The following items reflect action requirements identified in the March Monthly Project Report submitted to UMTA by their Project Management Oversight Consultant, Hill International.

### **ONGOING**

November 1990 Project Procedures

Concern: RCC is falling behind in developing its procedures.

Action: Update, develop, and publish project procedures.

Status: The LACTC has hired a Policies and Procedures Manager

responsible for the timely completion and issuance of project procedures. High-priority procedures are in process and

forecast to be completed by the end of April 1991.

NEW

No new PMOC action items identified in the March 1991

report.

RESOLVED

October 1990 Contract Closeout Procedures

Concern: The lack of approved closeout procedures limits the

(RCC/Parson-Dillingham's) ability to close contracts.

Status: RESOLVED. Physical closeout procedures have been developed

by Parsons-Dillingham. Physical and Records closeout procedures will be incorporated into the LACTC/RCC "high-priority" procedures manual to be completed by the end of April

1991.

## UMTA PROJECT MANAGEMENT OVERSIGHT CONSULTANT (CON'T)

January 1991 Project Management Plan/Letter of Understanding

Concern: Failure to reach a timely agreement (on the role of the SCRTD)

may impact the development/implementation of the Rail

Activation Plan.

Action: RESOLVED. Revision 4 of the Project Management Plan was

approved by UMTA based on the draft Letter-of-Understanding (LOU) submitted by the SCRTD. The PMOC agrees that the development and implementation of the Rail Activation Plan is not being adversely affected by the delay in final execution of

the LOU.

### **KEY ACTIVITIES - APRIL**

- Continued to assess and resolve the electrical and HVAC design misalignment at interfaces for all Stage II contracts.
- Continued corrective work to the floating slabs at Contract A175, Wilshire/Alvarado Station.
- Completed turnover of the AR tunnel from Contract A610/A115, Trackwork Installation, to Contract A620, Automatic Train Control.
- Integrated a full range of testing activities into the Project schedule.
- Completed turnover of DWP and ATC rooms to Systems contractors as required.
- Started Contract A146 tunnel rework; anticipate completion by May 15, 1991.
- Monitored the application of approved grouting materials throughout the system.

### **KEY ACTIVITIES - PLANNED FOR MAY**

- Continue physical close-out of Contracts A130, Yard Leads and Transfer Zone; A135, Union Station, Stage I; A145, 5th/Hill Station, Stage I; A165, 7th/Flower Station, Stage I; A175, Wilshire/Alvarado Station, Stage I.
- Continue resolution of design misalignment at electrical/HVAC interfaces for all Stage II contracts.
- Continue conduit verification on a station by station basis.
- Continue corrective work to floating slabs.
- Continue turnover of DWP and ATC rooms to systems contractors as required.

APRIL 199

STATUS DATE : APRIL 26, 1991

STATUS PERIOD : MARCH 30, 1991 TO APRIL 26, 1991

## RAIL CONSTRUCTION CORPORATION PROJECT COST REPORT Cost by Element (\$000)

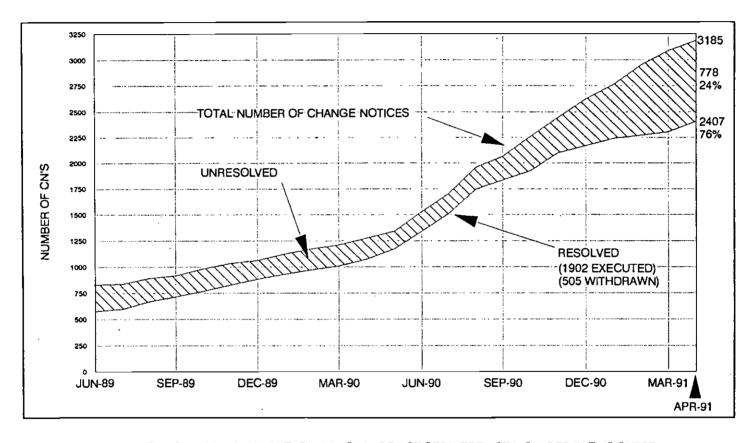
PROJECT: METRO RAIL RED LINE MOS-1

	BUDGET		AUTHORIZED FOR EXPENDITURE		COMMITMENTS		INCURRED COST		EXPENDITURES		CURRENT	VARIANCE
ELEMENT / DESCRIPTION	ORIGINAL	CURRENT	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TODATE	FORECAST	
<del></del>	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
T CONSTRUCTION	694,280	730,483	o	740,676	6,205	645,490	17,147	541,934	9,442	515,121	737,290	6,807
S PROFESSIONAL SERVICES	392,434	481,306	٥	303,332	(361)	385,13 <del>9</del>	5,897	381,548	5,897	381,548	481,531	225
R REAL ESTATE	90,894	139,620	450	1 16,769	450	116,769	450	116,769	450	116,769	139,820	o
F UTILITY/AGENCY FORCE ACCOUNTS	18,119	14,255	٥	13,115	0	13,115	498	9,621	498	9,621	14,255	0
D SPECIAL PROGRAMS	948	948	12	520	12	520	20	240	20	240	988	40
C PROJECT RESERVE	53,225	83,207	o	اه	٥	0	٥	0	0	0	76,135	(7,072
A PROJECT REVENUE	0	0	٥	O	o	o	o	O	0	<b>¥</b> (1,694)	0	0
PROJECT GRAND TOTAL	1,249,900	1,450,019	462	1,174,412	6,306	1,161,033	24,012	1,050,112	16,307	1,021,605	1,450,019	

\* REPRESENTS LEASE REVENUES RECEIVED BY RCC AT EARLY STAGES OF REAL ESTATE ACQUISITION.

NOTE: REFER TO APPENDIX FOR REPORT DEFINITIONS

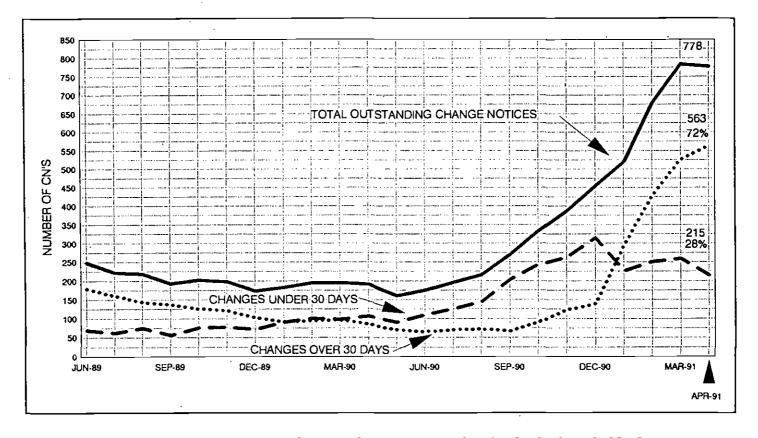
## CONSTRUCTION/PROCUREMENT CONTRACT CHANGES Change Notice Resolution



PRIOR TO JANUARY 1991, WITHDRAWN CHANGE NOTICES WERE NOT INCLUDED IN THIS CHART.

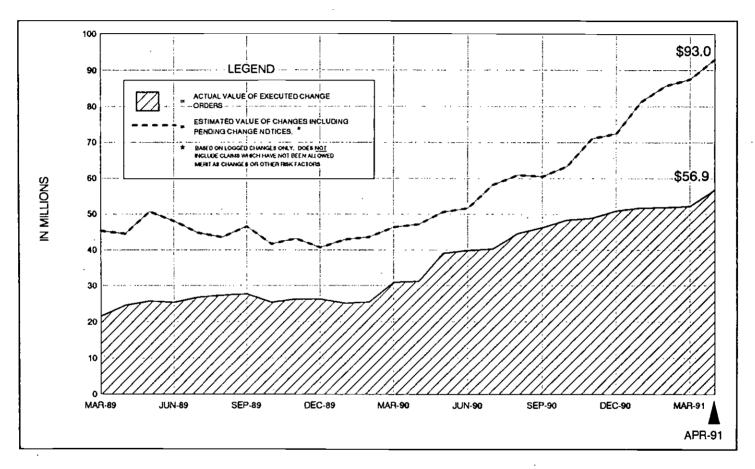
THE INCREASE TO "UNRESOLVED CHANGES" IS PRIMARILY DUE TO THE CONTINUED INCREASE IN CHANGE ACTIVITY IN STAGE II FINISH CONTRACTS, AND CLOSE-OUT COST-PLUS CHANGE NOTICES DUE TO THE ACCELERATION OF THE A167 LRT STATION.

## CONSTRUCTION/PROCUREMENT CONTRACT CHANGES Change Activity Progress



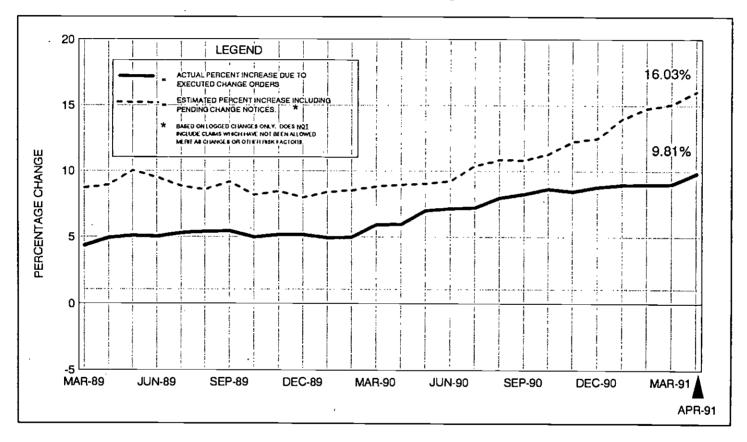
CHANGES OVER 30 DAYS CONTINUE TO INCREASE DUE TO THE BACKLOG OF PROPOSALS REQUIRED FROM THE CONTRACTORS. CURRENTLY 68% OF CHANGES REQUIRE ACTION BY THE CONTRACTORS.

### CONSTRUCTION/PROCUREMENT CONTRACT CHANGES Change Order Value



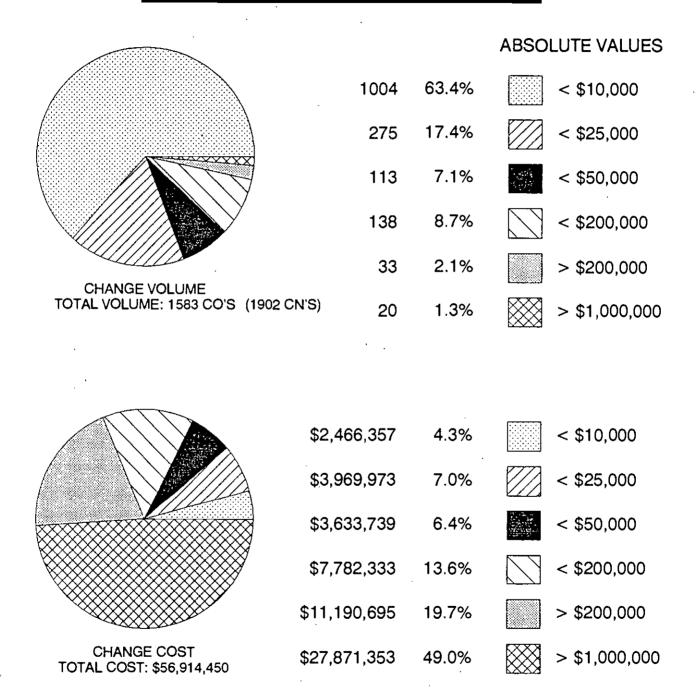
THE INCREASED VARIANCE BETWEEN CHANGE ORDERS EXECUTED AND ESTIMATED VALUE IS DUE TO THE INCREASED NUMBER OF STAGE II CHANGE NOTICES AND CLOSE-OUT ISSUES, SPECIFICALLY THE LINE ITEM UNIT COST CLOSE-OUT.

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

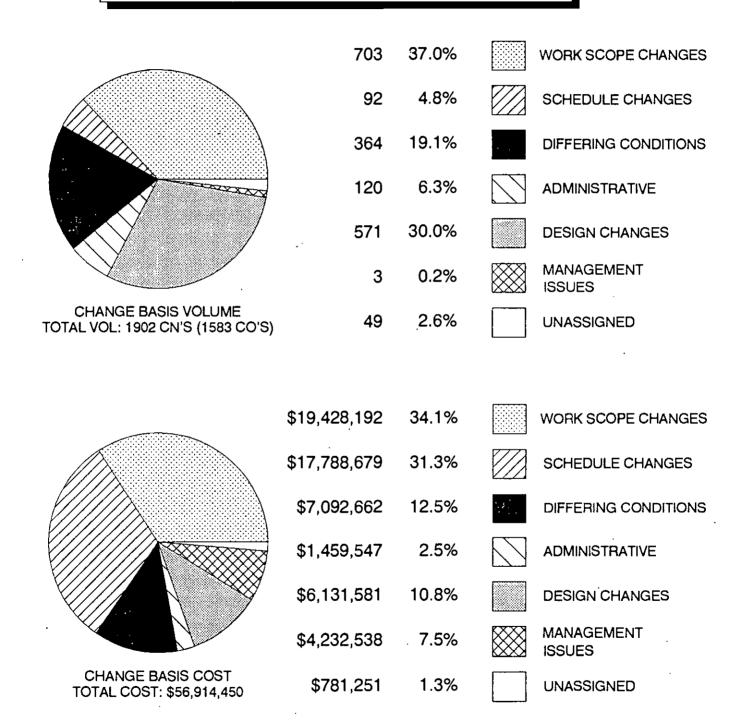


THE INCREASE IN ESTIMATED VALUE VS. ACTUAL VALUE IS DUE TO STAGE I CONTRACT CLOSE-OUT.

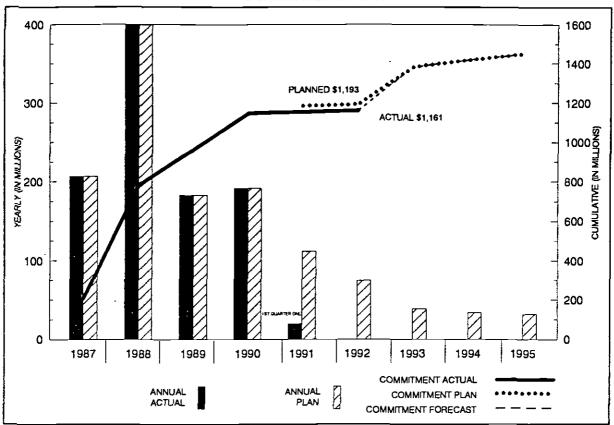
# CONSTRUCTION/PROCUREMENT CHANGE VOLUME AND COST BY COST LEVEL BASED ON EXECUTED CHANGES AS OF 4/26/91



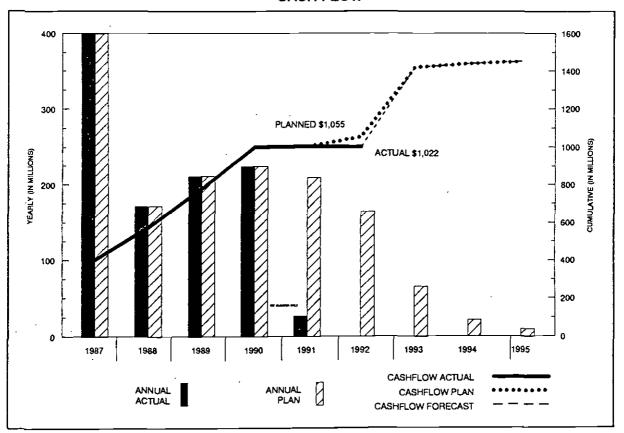
# CONSTRUCTION/PROCUREMENT CONTRACT CHANGES CHANGE VOLUME AND COST BY CHANGE BASIS TYPE BASED ON EXECUTED CHANGES AS OF 04/26/91



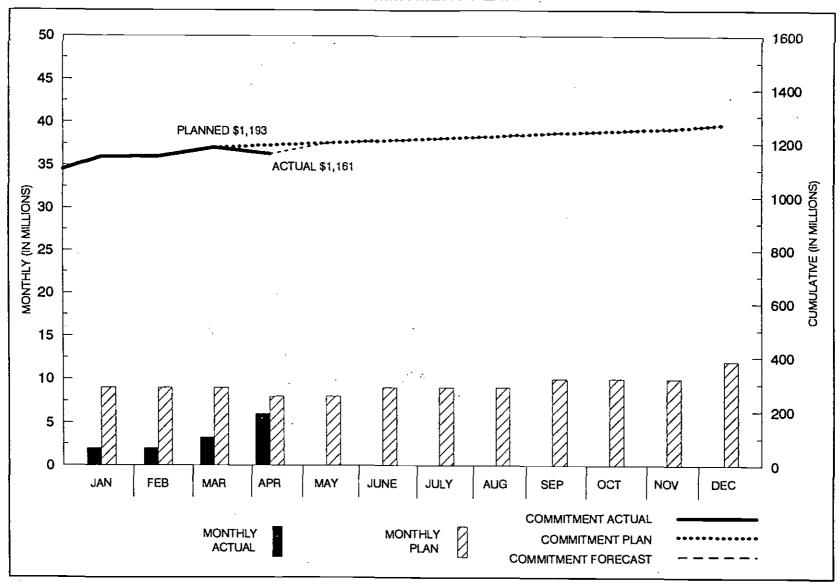
### **COMMITMENT PLAN**



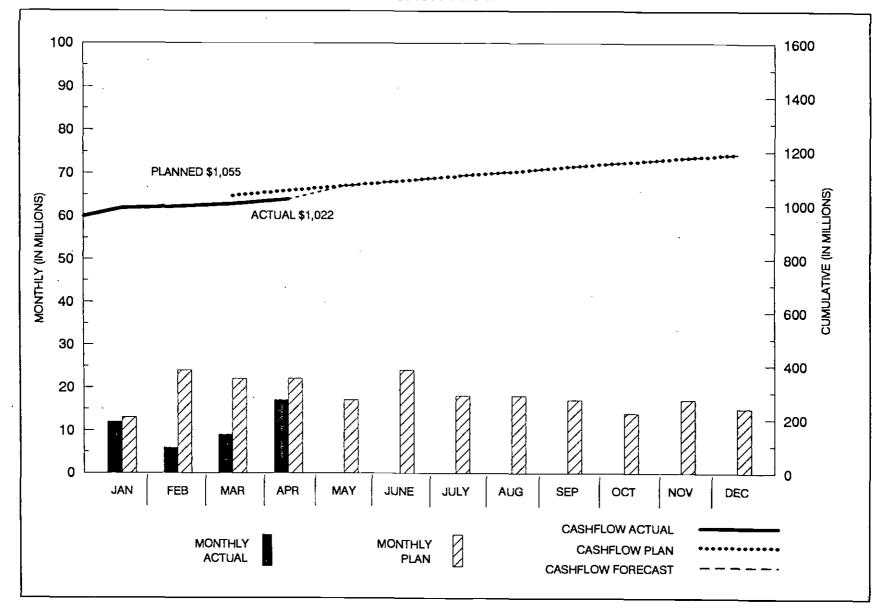
### **CASH FLOW**



### **COMMITMENT PLAN**



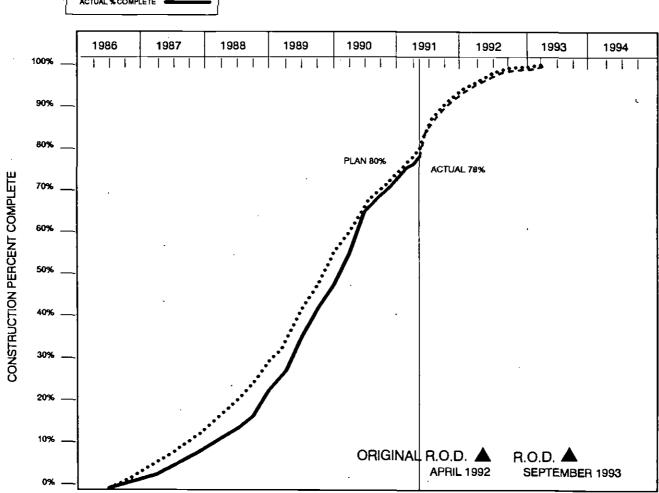
### **CASH FLOW**

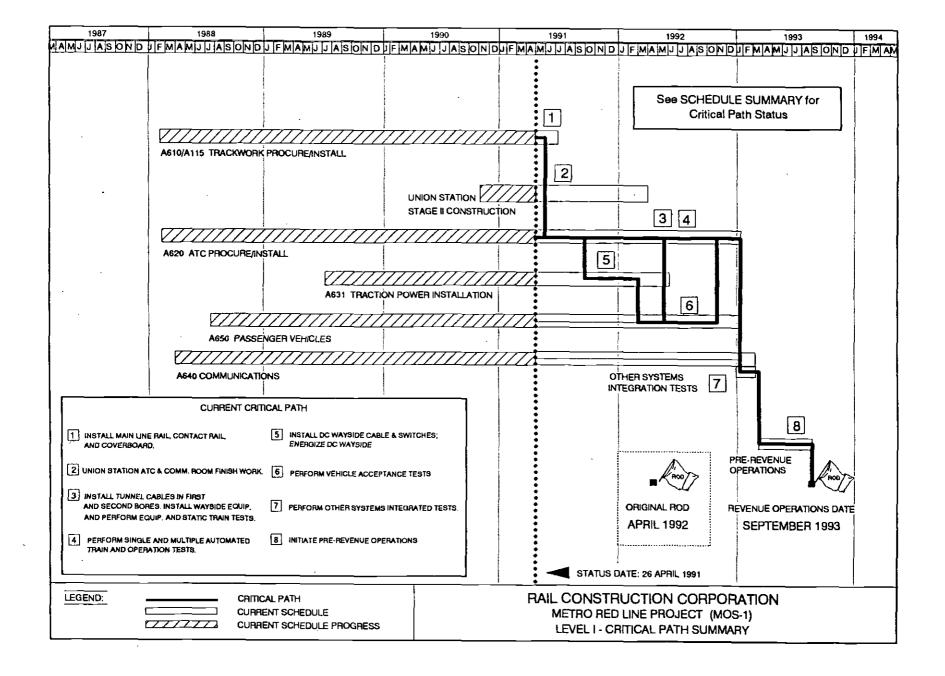


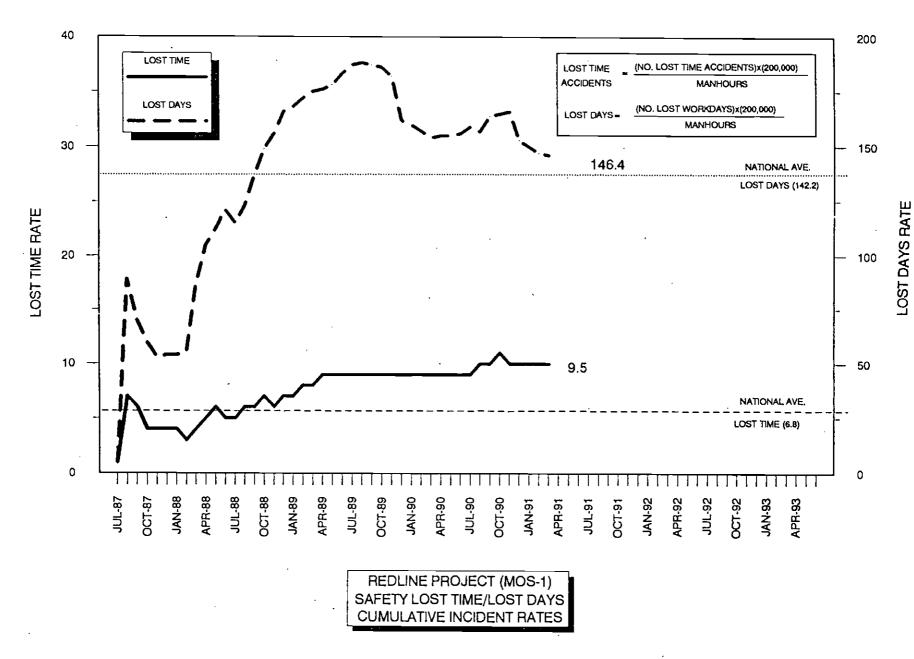
### RAIL CONSTRUCTION CORPORATION METRO RED LINE MOS-1



CONSTRUCTION PROGRESS (VALUE OF WORK IN PLACE)







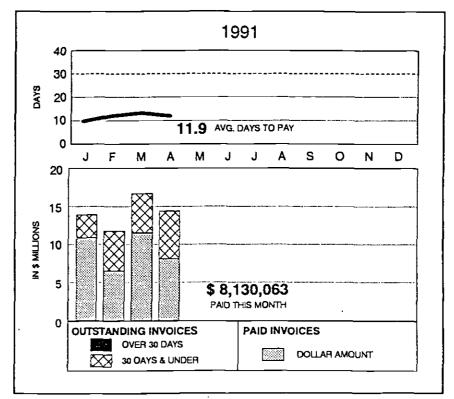
Total manhours as of March 1991: 8,569,442

### **MOS-1 REAL ESTATE - STATUS SUMMARY**

All of the real estate required for MOS-1 construction is available under ownership by the Rapid Transit District or under a right-of-entry. Currently, 14 parcels are in the acquisition process.

### **INVOICE PROCESSING**

- The average time taken to pay invoices for Construction and Procurement contracts (including Insurance) was 11.9 days.
- 15 invoices were processed for a total value of \$8,130,063.
- There were no outstanding Construction or Procurement invoices over 30 days old.



Note: The average days to pay is the time from when the Resident Engineer approves a progress payment (invoice) to when Accounting issues a check for this invoice.

### **OUTSTANDING INVOICES**

	Con	struction/Prod	curement Inv	roices		Other I	nvoices		
	30 Days	and Under	Over	30 Days	30 Days	and Under	Over 30 Days		
			Number of	Dollar	Number of	Dollar	Number of	Dollar	
Month	Invoices	Value	Invoices	Value	Invoices	Value	Invoices	Value_	
JAN 1991	4	3,039,993	0	0	12	3,952,988	7	1,620,858	
FEB 1991	12	5,248,873	i i	0	21	7,461,343	5	2,588,899	
MAR 1991	9	5,221,659	1	0	21	5,625,638	4	1,099,773	
APR 1991	9	6,319,949		0	- 21	7,217,508	9	2,374,298	
Í					[		1		
					]	_			

### **EXECUTIVE SUMMARY**

### **COST STATUS**

The Metro Red Line MOS-2 current budget is \$1,446 million with a current forecast of \$1,446 million. The project commitments to date are \$323.2 million or 22% of the total forecast. The cashflow plan reflects a total project expenditure to date of \$81.5 million or 6% of the total forecast, which is primarily for Design Consultant and Real Estate Contracts.

The following items have been identified this month as potential cost increases and trend notices have been issued or are in process: revised utility arrangement/relocation forecasts based on utility company estimates; revised Construction Management Consultant forecast based on contract negotiations; addition of Contract B253, Underpin Parking Structure; and revised forecast for Contract B251, Wilshire/Vermont to Vermont/Santa Monica Line.

### **SCHEDULE STATUS**

The Master Schedule update with status through April 26, 1991, shows that the project is currently on schedule.

The critical path for the Wilshire Line is through the Wilshire/Vermont Station and Line, Stage I, Contract B211, installation of systems, and the integrated testing with ROD in July 1996. The critical path for the Vermont/Hollywood Line is through the Hollywood/Western Station and Tunnels, Contract B271, installation of systems, and the integrated testing with ROD in September 1998.

#### PROFESSIONAL SERVICES

The overall MOS-2 design is approximately 56% complete versus the planned 62% completion. All design packages are planned to be completed on schedule.

The Construction Management activities for the month of April included: Planning an instrumentation program for MOS-2, observing the installation of settlement reference points, inclinometers, and observation wells at Contract B231, Wilshire/Western Station and Crossover, and monitoring the draining of the lake at MacArthur Park.

### **NEW**

**April 1991** 

**Blanket Permits** 

Concern:

Lack of blanket permits have forced contractors to obtain individual permits from the city to begin utility work. It is increasingly difficult to obtain individual utility permits to meet

schedule need dates.

Action:

RCC is expediting the blanket permit.

**RESOLVED** 

(From

February 1991

Cost Impact of B211 and B215 Alternate Design Package

Status:

Approved by the LACTC Board April 24, 1991.

(From

March 1991

Contract B211

Status:

Asbestos removal complete and legal efforts underway to assure

access of parcels B2113, B2115 and B2118 by 9/1/91.

### UMTA PROJECT MANAGEMENT OVERSIGHT CONSULTANT ITEMS FOR RCC ACTION

The following items reflect action requirements identified in the March Monthly Project Report submitted to UMTA by their Project Management Oversight Consultant, Hill International.

### ONGOING

October 1990 "Top Down" Station Construction

Concern: Failure to study this option will waste opportunities for schedule

and cost savings.

Action: Prepare analysis and recommendations regarding the "top-down"

station construction approach and other design alternatives.

Status: A draft analysis was prepared and submitted by MRTC in March

1991. MRTC submitted an alternatives analysis for the Hollywood/Highland Station in mid-April 1991. Complete alternative analysis for other MOS-2 stations is expected by mid-

May 1991.

November 1991 Improve Interface Planning (Action transferred from MOS-1)

Concern: Planning should include the preparation of detailed interface plans

identifying conditions under which contractors can access partly

completed portions of the work.

Action: Develop detailed contractor interface plans which address access

issues and responsibility for ventilation, temporary power, security, etc, when multiple contractors are working in the same area. Reflect partial and full access requirements in the contract documents. Review and update interface plans as access dates

approach.

Status: RCC Engineering is developing guidelines for interface plan

preparation and maintenance.

### **NEW**

March 1991 Depth of Design Drawing Detail

Concern: Need to perform an independent evaluation of the optimum level

of detail to be incorporated into design to maximize construction

cost and time savings.

Action: Assess results of revised procedures for handling contractor's

Requests-for-Information (RFI's) and prepare a cost/benefit assessment comparing increased design efforts to increased field

support efforts.

Status: MRTC is to provide comparative data on the volume and turn-

around time for RFI's by the end of May. RCC Engineering is to provide an cost/benefit assessment comparing increased design

efforts to increased field support efforts.

### **RESOLVED**

No PMOC action items resolved in March 1991.

### **KEY ACTIVITIES - APRIL**

- Advertised Contract B211, Wilshire/Vermont Station, with the modified scope eliminating station entrance work.
- Issued in-progress design submittal for Contract B271, Vermont/Santa Monica to Hollywood/Vine Line.
- Completed satisfactorily the architectural presentation for Contract B281, Hollywood/Vine Station.
- Completed Preliminary Engineering of Contract C301, Hollywood/Highland Station and Line.
- Completed and closed-out Contract B218, Demolition at the B221 Construction Site.
- Issued NTP and held the pre-construction meeting for Contract B201, Wilshire/Alvarado to Wilshire/Vermont Line.
- Issued NTP and held initial construction meetings for Contract B221, Wilshire/Normandie Station and Line. Excavation and worksite limits have been laid out and marked.
- Preparations are underway for the start of asbestos abatement work at Contract B231, Wilshire/Western Station. Drilling of observation well and inclinometer holes is underway.

### **KEY ACTIVITIES - PLANNED FOR MAY 1991**

- Open bids for Contract B211, Wilshire/Vermont Station, May 23, 1991.
- Issue pre-final design submittal for Contract B251, Wilshire/Vermont to Vermont/Santa Monica Line, May 2, 1991.
- Issue in-progress design submittal for Contract B241, Vermont/Beverly Station, and Contract B252, Vermont/Santa Monica Station, on May 15, 1991.
- Architectural presentation for Contract B261, Vermont/Sunset Station, is scheduled May 8, 1991.

#### RAIL CONSTRUCTION CORPORATION PROJECT COST REPORT COST BY ELEMENT

Project: R81 METRO RED LINE MOS-2

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Period: 30-Mar-91 to 26-Apr-91

Run Date: 09-May-91

Units: Dollars in Thousands

	ORIGINAL BUDGET	CURRENT	BUDGET		ORIZED ENDITURE		TMENTS	EXPEND:	_		FORECAST	FORECAS VARIANC
ELEMENT / DESCRIPTION		PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	PERIOD	TO DATE	
F Construction	893,000	0	893,000	87,794	223,879	79,823	213,437	535	6,728	8,756	954,131	61,13
Professional Service	289,150	0	289,150	112	61,765	17,308	70,698	2,947	37,977	11,549	300,752	11,6
Real Estate	79,827	0	79,827	503	37,281	2,239	37,896	1,253	36,688	0	82,475	2,6
Utility Relocation	36,668	0	36,668	0	13	456	1,121	108	148	(8,107)	20,921	(15,7
Special Programs	2,044	0	2,044	0	150	0	150	0	53	0	7,053	5,0
Project Reserve	145,743	0	145,743	0	0	0	o	0	0	(6,442)	92,165	(53,
Project Revenue	0	0	0	0	0	(4)	(109)	(4)	(109)	(5,756)	(11,065)	(11,
					•							
1			,									
	:		!									
		•	·									
			•				•					
Project Grand Total:	1,446,432	0	1,446,432	88,409	323,087	99,822	323,193	4,839	81,485	0	1,446,432	

NOTE: REFER TO APPENDIX FOR REPORT DEFINITIONS.

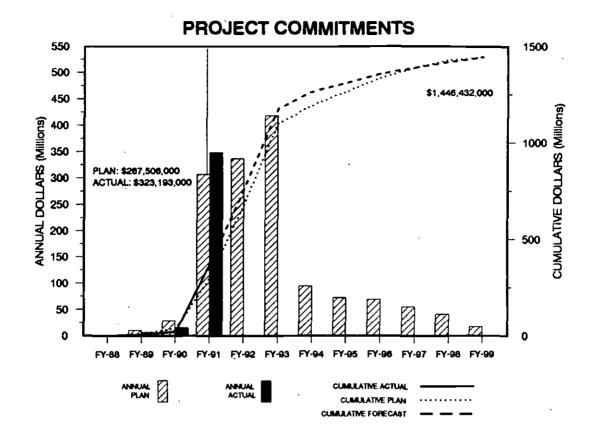
### **FUND SOURCE STATUS**

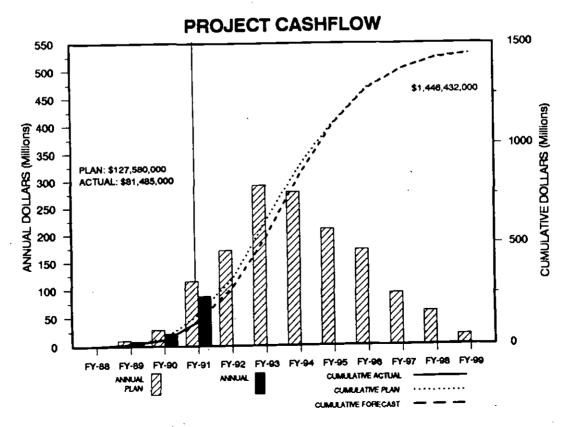
### (IN THOUSANDS OF DOLLARS)

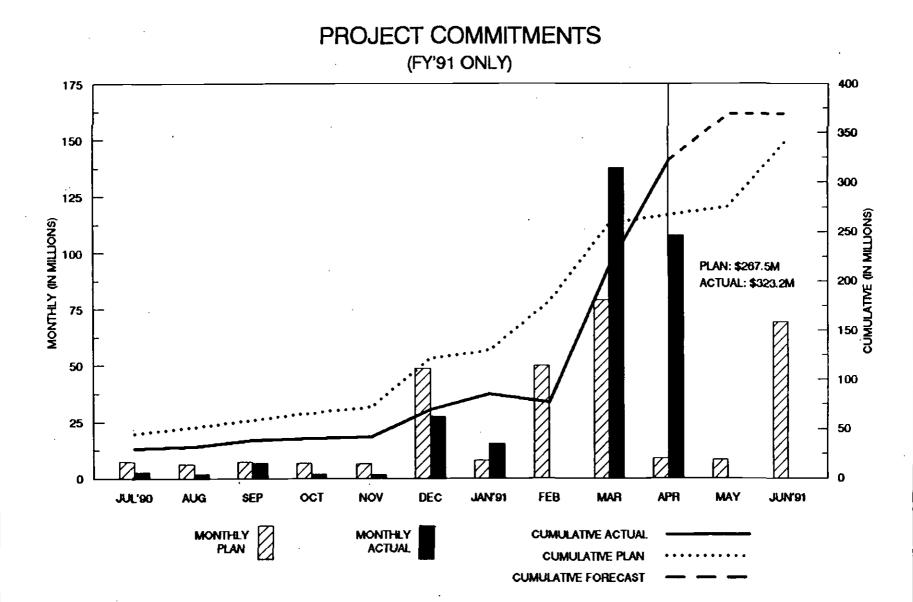
FUNDS ITICIPATED \$666,999,996	FUNDS AVAILABLE	_	\$	%	\$	%	SOUR(	%
*eee 000 00e								
φυου,333,330	\$329,668,113		\$164,033,000	25%	\$8,057,000	1%	\$8,057,000	194
\$185,984,500	\$27,000,000	•	\$37,986,000	20%	\$17,520,000	9%	\$0	0%
<b>\$</b> 439,447,171	\$39,066,584		\$89,725,000	20%	\$41,399,000	9%	\$41,399,000	9%
\$96,000,000	\$10,000,000		\$19,608,000	20%	\$9,045,000	9%	\$9,045,000	9%
\$58,000,000	\$0	* *	\$11,841,000	20%	\$5,464,000	9%	\$0	0%
1,446,431,667	\$405,734,697		\$323,193,000	22%	\$81,485,000	6%	\$58,501,000	4%
	\$439,447,171 \$96,000,000 \$58,000,000	\$439,447,171 \$39,066,584 \$96,000,000 \$10,000,000 \$58,000,000 \$0	\$439,447,171 \$39,066,584 \$96,000,000 \$10,000,000 \$58,000,000 \$0 ***	\$439,447,171 \$39,066,584 \$89,725,000 \$96,000,000 \$10,000,000 \$19,608,000 \$58,000,000 \$0 ** \$11,841,000	\$439,447,171 \$39,066,584 \$89,725,000 20% \$96,000,000 \$10,000,000 \$19,608,000 20% \$58,000,000 \$0 ** \$11,841,000 20%	\$439,447,171 \$39,066,584 \$89,725,000 20% \$41,399,000 \$96,000,000 \$10,000,000 \$19,608,000 20% \$9,045,000 \$58,000,000 \$0 ** \$11,841,000 20% \$5,464,000	\$439,447,171 \$39,066,584 \$89,725,000 20% \$41,399,000 9% \$96,000,000 \$10,000,000 \$19,608,000 20% \$9,045,000 9% \$58,000,000 \$0 ** \$11,841,000 20% \$5,464,000 9%	\$439,447,171 \$39,066,584 \$89,725,000 20% \$41,399,000 9% \$41,399,000 \$96,000,000 \$10,000,000 \$19,608,000 20% \$9,045,000 9% \$9,045,000 \$58,000,000 \$0 ** \$11,841,000 20% \$5,464,000 9% \$0

<sup>\*</sup> AWAITING EXECUTION OF STATE FUND TRANSFER AGREEMENT.

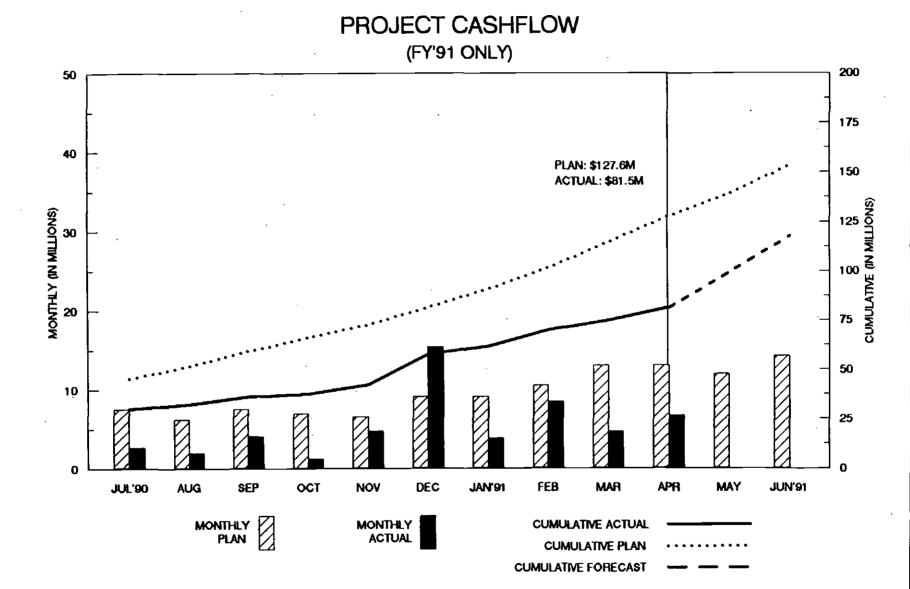
<sup>\*\*</sup> PENDING RESOLUTION OF LITIGATION. IN THE INTERIM, LACTC WILL PROVIDE THE BENEFIT ASSESSMENT SHARE.





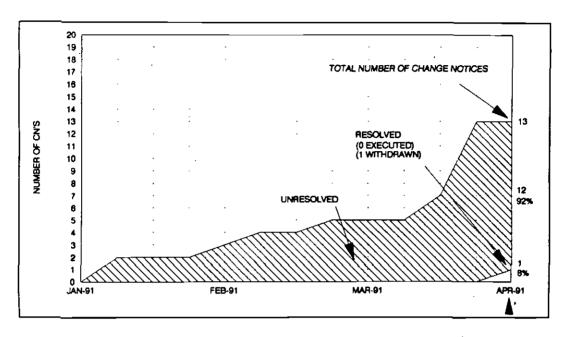


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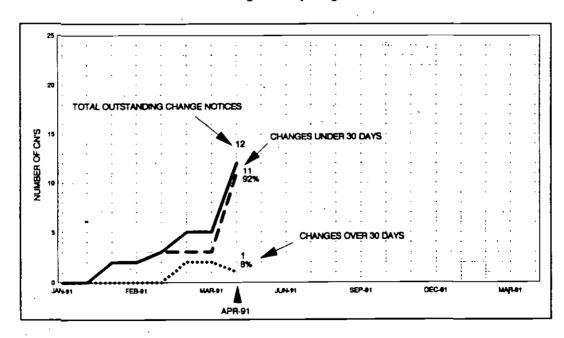
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### CONSTRUCTION/PROCUREMENT CONTRACT CHANGES Change Notice Resolution



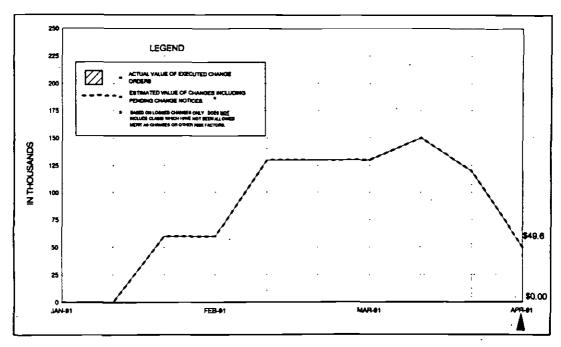
2 COST PLUS CHANGE NOTICES HAVE BEEN ISSUED WITH 1 CANCELLED. 8 DESIGN CHANGES, 1 CHANGE TO SPECIFICATIONS, AND 1 CHANGE TO COST REIMBURSEMENT ARE AWAITING CONTRACTOR'S COST PROPOSALS.

### CONSTRUCTION/PROCUREMENT CONTRACT CHANGES Change Activity Progress



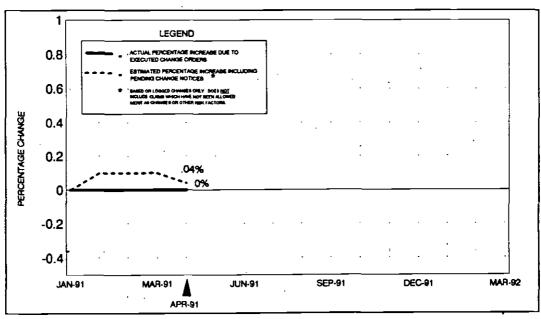
2 COST-PLUS CHANGE NOTICES (1 OVER 30 DAYS) ARE TO BE CLOSED-OUT; 10 CHANGE NOTICES ARE AWAITING CONTRACTOR'S COST PROPOSALS.

### CONSTRUCTION/PROCUREMENT CONTRACT CHANGES Change Order Value



THERE ARE NO CHANGE ORDERS EXECUTED AS OF 4/28/91. A DECREASE IN ESTIMATED VALUE OF \$79,408 IS DUE TO THE CANCELLATION OF 1 COST-PLUS CHANGE NOTICE AND THE ISSUE OF 2 CREDIT CHANGE NOTICES.

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



THERE ARE NO CHANGE ORDERS EXECUTED AS OF 4/26/91. THE ESTIMATED PERCENTAGE OF CHANGE DOLLARS AS A PERCENTAGE OF ORIGINAL CONTRACT AWARD IS .04% DUE TO THE CANCELLATION OF 1 COST-PLUS CHANGE NOTICE, AND THE ISSUE OF 2 CREDIT CHANGE NOTICES.

### MOS-2 METRO RED LINE PROJECT CONFIGURATION CONTROL BOARD C O N.T R A C T V A L U E S U M M A R Y AS OF 04/26/91

CONTRACT	AUARD		RENT # CO'S	OBLIGATION \$ CO'S	CURRENT VALUE	# CN'S	\$ CN'S	N R E S O # CPCN'S	S CPCN'S	N N G E S TOTAL #	\$ PENDING	TOTAL POTENTIAL VALUE
8218	\$64,0	00.00	0	\$0.00	\$64,000.00	2	\$12,794.00	2	\$67,400.00	4	\$80,194.00	\$144,194.00
B221	\$79,812,9	93.00	. 0	\$0.00	\$79,812,993.00	4	(\$15,300.00)	0	\$0.00	4	(\$15,300.00)	\$79,797,693.00
B231	\$53,645,2	01.00	0	\$0.00	\$53,645,201.00	4	(\$15,300.00)	0	\$0.00	4	(\$15,300.00)	\$53,629,901.00
B616	\$2,946,4	00.00	0	\$0.00	\$2,946,400.00	0	\$0.00	0	\$0.00	0	\$0.00	\$2,946,400.00
TOTALS:	136,468,5	94.00	0	\$0.00	\$136,468,594.00	10	(\$17,806.00)	2	\$67,400.09	12	\$49,594.00	\$136,518,188.00

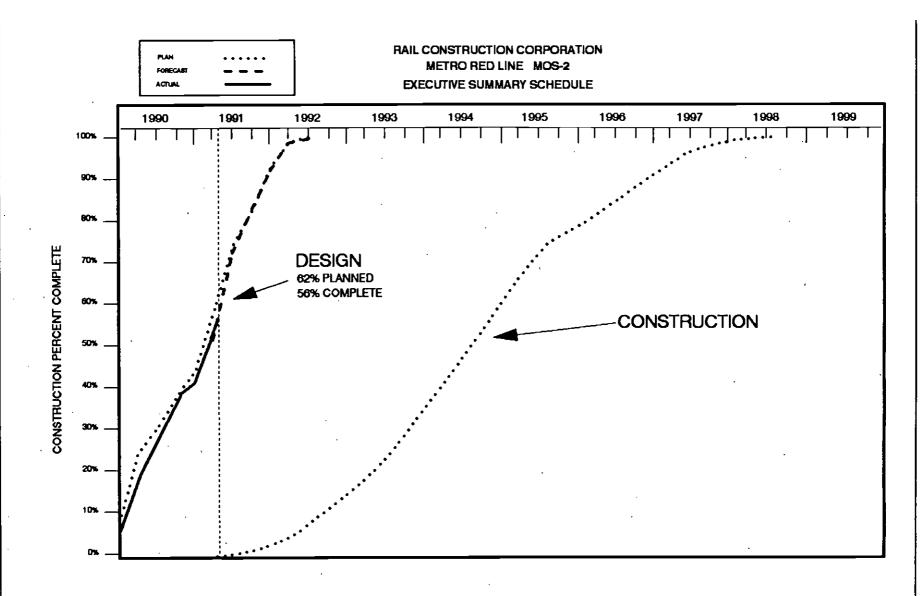
% CHANGE FROM AWARD VALUE:

0.00%

0.04%

04/19/91											
RP1:	\$136,468,594.00	0	\$0.00 \$1	136,468,594.00	10	(\$17,806.00)	3	\$137,400.00	13	\$119,594.00	\$136,588,188.00
E22222			****************				****		*****	*======================================	
VAR:	\$0.00	0	\$0.00	\$0.00	0	\$0.00	- 1	(\$70,000.00)*	- 1	(\$70,000.00)	(\$70,000.00)

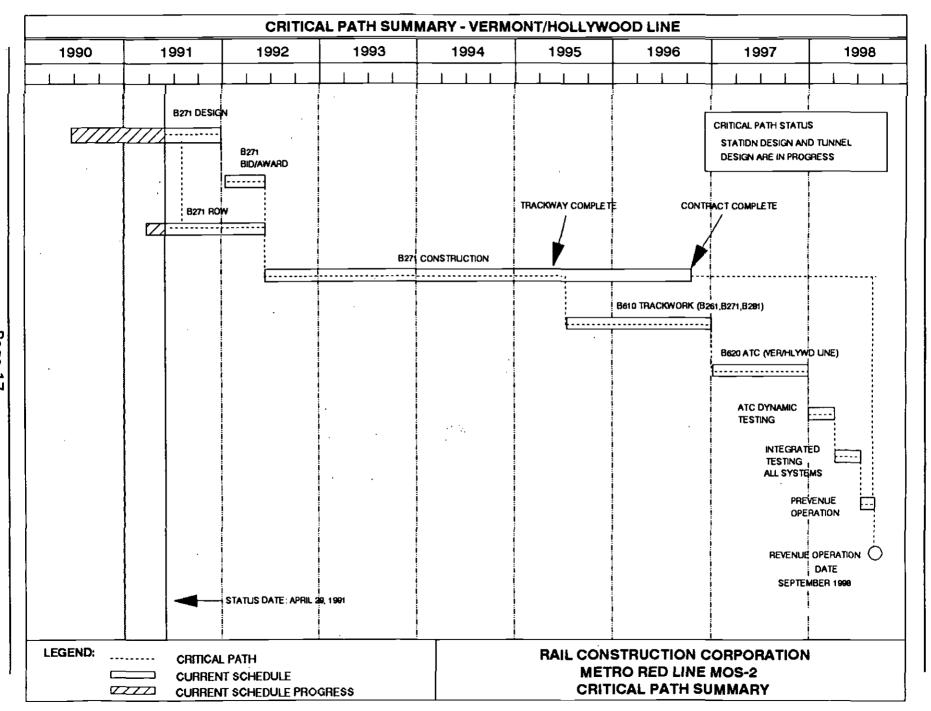
<sup>.</sup> COST PLUS CHANGE NOTICE 8231-CN-001 CANCELLED



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### **REAL ESTATE SUMMARY**

	NO. OF	NUN	ABEA	JUST	COMP	OF	FERS	AGREE	MENT	CONOEM-	PAR	CELS	PARCELS	CONSTRUCT
CCU	PARCELS	CER	TIFIED	APPF	OVED	<u> M</u> /	ADE	SIGN	ED	NATION	AVAIL	ABLE	NOT	NTP DATE
		PLAN	ACT	PLAN	ACT	PLAN	ACT	PLAN	ACT		PLAN	ACT	AVAILABLE	
B201	5	5	5	5	4	5	4	5	. 1	3	1	1	4	04/24/91
B211	7	6	5	:4	4	4	4	4	0	2	0	0	7	08/12/91
B218	1	1	1	1	1	1	1	1	0	1	1	1	0	01/10/91
B221	15	15	13	15	13	15	12	15	6	0	1	1	14	04/15/91
B231	3	3	3	3	2	3	2	3	2	0	1	1	2	02/11/91
B241	2	0	2	0	0	0	0	. 0	0	0	0	0	2	05/17/93
B251	19	19	18	0	0	-0	0	0	0	0	0	0	19	02/04/92
B252	3	0	3	0	0	0	0	0	0	0	0	0	3	06/24/92
B261	3	0	0	0	0	o	0	0	0	0	0	0	3	04/21/93
B271	9	1	1	0	1	٥	1	0	1	0	0	. 1	8	06/04/92
B281	1	0	1	0	0	0	0	0	0	. 0	0	0	1	11/25/92
TOTAL	68	50	52	28	25	28	24	28_	10	6	4	5	63	

There are 27 parcels "Not Available" in Contracts B201, B211, B221 and B231. Of those parcels not available, two reflect a need date of 04/24/91, one for 05/15/91, three for 08/01/91, two for 08/12/91, and nineteen for 09/01/91.

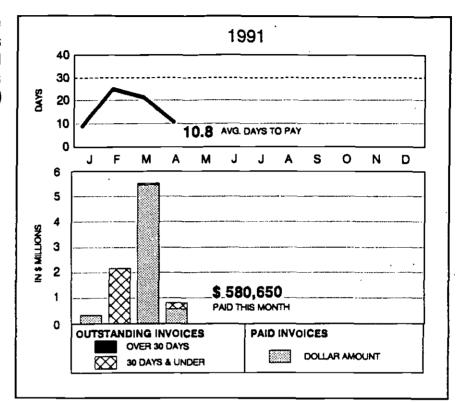
All parcels, with the exception of the two for 04/24/91 and one for 08/01/91 "Need Dates" are on schedule with the designated need dates.

We have a Grant of Easement for both of the 04/24/91 parcels and are now waiting for the execution of the Memorandum of Understanding to complete the "Availability".

The 08/01/91 date is delayed due to the Order for Possession not being perfected. The tenants have challenged the Order for Possession, and have been granted a Stay Period by the judge.

### **INVOICE PROCESSING**

- The average time taken to pay invoices for Construction and Procurement contracts (including Insurance) was 10.8 days.
- 6 invoices were processed for a total value of \$580,650.
- There were no outstanding Construction or Procurement invoices over 30 days old.



Note: The average days to pay is the time from when the Resident Engineer approves a progress payment (invoice) to when Accounting issues a check for this invoice.

### **OUTSTANDING INVOICES**

	Con	struction/Pro	curement Inv	voices	Other Invoices						
	30 Days	and Under	Over	30 Days	30 Days	and Under	Over 30 Days				
	Number of	Dollar	Number of	Dollar	Number of	Dollar	Number of	Dollar			
Month	Invoices	Value	Invoices	Value	Invoices	Value_	Invoices	Value			
JAN 1991	1	5,712	0	0	14	2,658,716	13	178,325			
FEB 1991	4	2,174,042	\ o	0	16	2,339,615	18	561,649			
MAR 1991	2	68,946	0	0	27	573,361	17	311 <u>,</u> 103			
APR 1991	3	235,308	0	0	8	261,468	6	304,850			
ì	1 . 1		1 1		i i		1 1				
							<u> </u>				