



OPERATIONS COMMITTEE  
APRIL 17, 2003

Metropolitan  
Transportation  
Authority

One Gateway Plaza  
Los Angeles, CA  
90012-2952

**SUBJECT: CONTRACT NUMBER P2550 LIGHT RAIL VEHICLES**

**ACTION: AWARD P2550 CONTRACT FOR PROCUREMENT OF FIFTY LIGHT RAIL VEHICLES**

**RECOMMENDATION**

- A. Adopt the Budgets for Pasadena Gold Line and Eastside Extension Light Rail Vehicle Projects 800088 and 800151 for the value of \$191,222,902 (See Attachment A)
- B. Authorize the Chief Executive Officer's designee to award a five-year, firm-fixed-price contract, Contract No. P2550, to AnsaldoBreda S.p.A., for the manufacturing and delivery of 50 light rail vehicles (LRV), in an amount of \$158,738,671 for the base contract buy, exclusive of two 50-LRV options.
- C. Authorize the Chief Executive Officer's designee to execute change orders for this procurement in the amount of \$1,000,000 per change order with cumulative change orders not to exceed 10% of the current approved contract value.

**RATIONALE**

The recommended Light Rail Vehicle Budget is based upon the actual P2550 LRV bid price and upon the actual PS 8310-1267 Rail Consultant proposal price. Consideration was included for Project Contingency and for MTA LRV Project staff. (See Attachment A) The award recommendation for the PS 8310-1267, Rail Consultant Contract is the subject of a separate accompanying Board Report

This recommended award of this P2550, LRV procurement is consistent with the January 31, 2002, MTA Rail Fleet Management Plan, as submitted to the Federal Transit Administration. The P2550 contract base buy of 50 LRVs will provide the Pasadena Gold Line with the additional vehicles needed to augment the P2000 LRVs already destined for the Pasadena Gold Line. The contract's base buy also provides LRVs needed to satisfy the requirements of the Eastside Extension, which is currently being implemented on an accelerated basis with a projected opening date in October 2008. These LRVs are operationally compatible with all existing MTA light rail lines. Given the current and future level of patronage for the agency's light rail lines, this approach provides the necessary flexibility to service all light rail lines as the rail system requirements continue to expand.

At its October 2001 meeting the MTA Board directed that the P2550, Light Rail Vehicle Acquisition be conducted as a two-step, technically acceptable, low-bid procurement. The two-step, sealed-bid process is allowed by MTA's Procurement Policies and Procedures. The two-step, sealed-bid process is a competitive procedure designed to decrease the risk of technical insufficiency over the standard sealed low-bidding process.

Staff proceeded with the two-step, technically acceptable, low-bid process. Under Step One, technical proposals are requested which are evaluated against strict criteria regarding acceptability of the engineering approach, the manufacturing process, and other factors of concern. Under Step Two, those firms with technical proposals considered to be acceptable are invited to submit sealed fixed-price bids. Award is then made to the firm with the lowest bid price.

The base contract award for 50 LRVs is necessary to meet the fleet requirements for the Pasadena Gold Line and Eastside Extension. The contract options for fifty vehicles each are designed to make vehicles available for future rail expansion, as well as for replacement of fleet vehicles scheduled for major overhaul or retirement. Additional vehicles are also a contingency for extended rail operation hours, and longer trains on shorter headways.

The Notice To Proceed on this contract is scheduled for May 2003, and the delivery of the fiftieth base contract LRV is scheduled for 48-months later or approximately May 2007. The delivery rate is a modest two LRVs per month. The required delivery dates have liquidated damages assessments that can be imposed for late deliveries. The contract contains two options, which, if exercised, would extend the contract another two years each. The options will only be awarded subject to adequate funding and Board approval.

Option No. 1 for 50 LRVs may be exercised at any time but no later than 34 months after the Base Order Notice To Proceed or approximately March 2006. Option No. 2 for 50 LRVs may be exercised at any time, but no later than 48 months after the Base Order Notice To Proceed or approximately May 2007. The option prices for the LRVs are approximately 20% less than the base buy LRVs, but the options are priced in 2002 dollars and are subject to escalation based upon the Producer Price Index for Intermediate Materials Supplies and Components, published by the United States Department of Labor.

Lessons-learned from experience with the P2000 LA Car contract has resulted in the organization of this LRV project as an Integrated Project Team (IPT) under MTA's Rail Fleet Services that provides for:

1. Centralized control of strategic decision making.
2. IPT decision making limited to management staff with a need-to-know.
3. Organization of IPT is horizontal rather than vertical in order to enhance operational decision making, resource flexibility and empower staff.
4. The objective of the IPT is to accomplish the timely delivery of modern rail vehicles for the Los Angeles County public
5. Identify functional support departments within the MTA.
6. Manage an LRV consulting firm with the additional specialized disciplines on an as needed basis to successfully prosecute the LRV project. The consultant staff will augment the MTA's IPT staff.

Recommendation C will allow MTA and the Contractor to negotiate any necessary contract modifications in a timely manner to ensure that the maximum cost and schedule benefits can be realized. This recommendation is consistent with other vehicle procurements.

Staff will only execute this contract pending receipt of the Letters Of No Prejudice from the Federal Transit Administration.

### **FINANCIAL IMPACT**

Funding of \$11.7 million is included in the FY03 budget for the P2550 project in cost center 8310 Rail Fleet Services, under project numbers 800088 and 800151. Expenditures to-date for the P2550 project total \$210,000. Since this is a multi-year contract, the Deputy Chief Executive Officer and Project Manager will be responsible for budgeting the cost in future years.

The life of project budget for the P2550 Light Rail Vehicle project is \$191,222,902. This project is funded with a combination of federal, state and local funds, including a contribution from the Eastside Extension project. Because the full funding grant agreement for the Eastside Extension has not yet been executed, the federal funds required for the P2550 project must be pre-approved from the FTA prior to contract authorization. If the Eastside Extension does not move forward as planned, the MTA will have to defer or cancel \$41 million of other projects to ensure funding for the P2550 project.

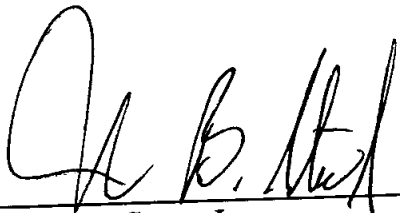
### **ALTERNATIVES CONSIDERED**

Since there is a definite requirement for more LRVs, the primary alternative considered was in the method of procurement. The competitive negotiation methodology (PUC § 130238) was initially considered for this procurement. It was eventually determined that a two-step low-bid procurement would be more advantageous.

## ATTACHMENTS

- A. Project Budget
- B. Procurement Summary
- B-1. Procurement History
- B-2. List of Subcontractors
- B-3. Bid tabulation

Prepared by: Gerald C. Francis, General Manager, Rail Operations  
Dave J. Kubicek, Director of Rail Fleet Services  
Ed Velasquez, Sr. Contract Administrator  
Larry Kelsey, Contract Administration Manager



---

John B. Catoe, Jr.  
Deputy Chief Executive Officer

**BOARD REPORT ATTACHMENT A**

**LIGHT RAIL VEHICLES PROJECT  
PROPOSED BUDGET**

<b>ELEMENT</b>	<b>PROPOSED LRV PROJECT BUDGET FOR 800151 (PASADENA)</b>	<b>PROPOSED LRV PROJECT BUDGET FOR 800088 (EASTSIDE)</b>	<b>PROPOSED TOTAL LRV PROJECT BUDGET</b>	<b>COMMENTS</b>
<b>Base Buy 50 LRVs</b>	\$89,800,500	\$59,867,500	\$149,667,500	30 LRVs for the Pasadena Gold Line and 20 LRVs for the Eastside Line
<b>Base Buy Spare Parts</b>	\$4,387,357	\$2,924,943	\$7,312,357	
<b>Base Buy Special Tools &amp; Test Equip</b>	\$1,055,288	\$703,526	\$1,758,814	
<b>Subtotals</b>	\$95,243,203	\$63,495,468	\$158,738,671	
<b>Contingency</b>	\$9,524,320	\$6,349,547	\$15,873,867	A portion of the LRV Project Contingency.
<b>Subtotals</b>	<b>\$104,767,523</b>	<b>\$69,845,015</b>	<b>\$174,612,538</b>	
<b>Rail Consultant</b>	\$5,153,122	\$3,435,415	\$8,588,537	Contract PS 8310-1267 for Rail Consultant staff augmentation services
<b>Contingency</b>	\$257,656	\$171,771	\$429,427	A portion of the LRV Project Contingency
<b>Subtotals</b>	<b>\$5,410,778</b>	<b>\$3,607,186</b>	<b>\$9,017,964</b>	
<b>MTA Staff</b>	\$4,555,440	\$3,036,960	\$7,592,400	MTA staff on the Integrated Project Team
<b>TOTALS</b>	<b>\$114,733,741</b>	<b>\$76,489,161</b>	<b>\$191,222,902</b>	

## BOARD REPORT ATTACHMENT B

### CONTRACT NUMBER P2550 LIGHT RAIL VEHICLES PROCUREMENT SUMMARY

1.	Contract Number: P2550, LIGHT RAIL VEHICLES		
2.	Recommended Vendor: ANSALDOBREDA S.p.A.		
3.	Cost/Price Analysis Information:		
	A. Total Bid Price: \$397,140,072 (base order & options)	Recommended Award Price: \$158,738,671 (base order only)	
	B. Details of Significant Variances are in Attachment A-1.D		
4.	Contract Type: Firm-Fixed Price		
5.	Procurement Dates:		
	A. Issued: February 11, 2002		
	B. Advertised: February 11, 2002		
	C. Pre-proposal Conference: February 19, 2002		
	D. Bids Due: December 3, 2002		
	E. Pre-Qualification Completed: October 18, 2002		
	F. Conflict of Interest Form Submitted to Ethics: December 6, 2002		
6.	Small Business Participation:		
	A. Bid/Proposal Goal: N/A: Rolling Stock DBE Program is administered by the FTA	Date Small Business Evaluation Completed: N/A	
	Small Business Commitment: N/A		
7.	Invitation for Bid/Request for Proposal Data:		
	Notifications Sent: 123	Bids/Proposals Picked up: 66	Bids/Proposals Received: Four (4) Technical Proposals Two (2) Bids, One (1) No Bid
8.	Evaluation Information:		
	A. Bidders/Proposers Names:  See Attachment A-3	Bid/Proposal Amount:  See Attachment A-3	Best and Final Offer Amount: N/A
	B. Evaluation Methodology: Describe Methodology Details are in Attachment A-1		
9.	Protest Information:		
	A. Protest Period End Date: Close of Business – April 26, 2003		
	B. Protest Receipt Date: TBD		
	C. Disposition of Protest Date: TBD		
10.	Contract Administrator: Ed Velasquez	Telephone Number: 922-7315	
11.	Project Manager: Dave Kubicek	Telephone Number: 922-3340	

## BOARD REPORT ATTACHMENT B-1

### CONTRACT NUMBER P2550 LIGHT RAIL VEHICLES PROCUREMENT HISTORY

#### A. Background on Contractor

The contractor recommended for this P2550 award is ANSALDOBREDA S.p.A. of Naples, Italy. AnsaldoBreda is a large engineering and manufacturing firm capable of providing as much as 2,000,000 manufacturing hours per year. The company is one of several leading manufacturers of both heavy and light rail vehicles. AnsaldoBreda will dedicate one entire assembly line to the production of the P2550 light rail vehicles for the MTA. AnsaldoBreda has designed, manufactured, and delivered LRVs to San Francisco and Atlanta, as well as Boston. They have numerous contracts for LRVs in Europe. AnsaldoBreda satisfactorily designed, manufactured, and delivered 104 A650 heavy rail vehicles that are presently in use on the MTA's Metro Red Line.

#### B. Procurement Background

The P2550, Light Rail Vehicle procurement, was conducted as a two-step, technically acceptable, low-bid procurement as approved by a 2/3 vote of the Board at its October 2001 meeting.

Bidders were required to submit un-priced technical proposals as step-one of the process. These technical proposals were evaluated on a pass/fail basis against the compliance requirements of the P2550 technical specifications. Bidders with acceptable technical proposals were invited to submit bid prices. There is no MTA-established DBE goal for this project nor will the MTA be performing any DBE compliance monitoring, as all DBE requirements on rolling stock procurements are controlled and monitored by the Federal Transit Administration.

The P2550 contract also includes two 50-LRV pre-priced options for future growth, expansions, and new lines. These options will require future Board approval in order to become a binding contract requirement. The LRV price for the P2550 contract base 50-LRV buy is a very competitive \$2,993,350 per LRV. The bare LRV prices for the two 50-LRV options are even more competitive at \$2,376,594 per Option No. 1 LRV and \$2,391,434 per Option No. 2 LRV. The action of awarding and exercising the contract base buy and acknowledging the future availability of the two additional 50-LRV options should the Board decide that additional vehicles be needed, will save the MTA an estimated \$61 million dollars. This information is based on the original estimates for rail car procurements that will be required to ensure the success and growth of the expanding MTA rail system.

**C. Evaluation of Proposals and Bids**

This procurement was conducted in compliance with MTA Procurement policies and procedures.

As previously noted, bidders were required to submit un-priced technical proposals as step-one of the process. These technical proposals were evaluated on a pass/fail basis against the compliance requirements of the P2550 technical specifications. Four (4) firms submitted technical proposals and one firm failed to pass the step-one technical evaluation. Siemens submitted a technical proposal that, by their own admission, was not compliant with the MTA's technical requirements. Therefore, Siemens was deemed non-responsive and was not invited to submit a bid price. Three firms were invited to submit bids. Two firms, AnsaldoBreda and Kinkisharyo, responded with bids and one firm, Bombardier, submitted a "no bid" because of its unwillingness to accept the MTA's contractual terms and conditions.

**D. Cost/Price Analysis Explanation of Variances**

The recommended price has been determined to be fair and reasonable based upon receipt of Competitive Bids and an Engineering estimate.

<b>Bid/Proposal Amount</b>	<b>MTA Estimate</b>	<b>Recommended Award Amount</b>
\$397,140,072 (base & options)	\$458,225,774	\$158,738,671 (base order only)



**BOARD REPORT ATTACHMENT B-2**  
**CONTRACT NUMBER P2550 LIGHT RAIL VEHICLES**  
**LIST OF SUBCONTRACTORS**

**PRIME CONTRACTOR** – ANSALDOBREDA S.p.A. of Naples and Pistoia, Italy

**Major Subcontractors**

**Friction Brakes & Pneumatic System:**

Knorr Brake of Westminster, MD

Wabco Transit Division of Spartanburg, SC

**Door Controls:**

IFE North America of Westminster, MD

Westcode, Inc. of Westchester, PA

**Air Conditioning:**

Sutrak Corporation of Commerce City, CO

Thermo King Corporation of Minneapolis, MN

**Automatic Train Protection:**

Union Switch & Signal of Pittsburgh, PA

Alstom Signaling, Inc. of Rochester, NY

**BOARD REPORT ATTACHMENT B-3**  
**CONTRACT NUMBER P2550 LIGHT RAIL VEHICLES**  
**BID TABULATION**

**Step-One Technical Proposals were received from:**

1. AnsaldoBreda S.p.A.
2. Bombardier Transit Corporation, LLC
3. Kinkisharyo International/Mitsui, Joint Venture
4. Siemens Transportation Systems, Inc.

**The following Bidders had acceptable Technical Proposals and were invited to submit Step-Two Bid prices:**

1. AnsaldoBreda S.p.A.
2. Bombardier Transit Corporation, LLC
3. Kinkisharyo International/Mitsui, Joint Venture

**The following Bidders submitted Step-Two Bid prices:**

<b>BIDDER</b>	<b>TOTAL BID PRICE (BASIS OF AWARD)</b>	<b>AWARD VALUE (BASE ORDER)</b>
AnsaldoBreda S.p.A.	\$397,140,072	\$158,738,671
Kinkisharyo International/Mitsui, JV	\$431,562,330	\$159,672,330
Bombardier Transit Corporation, LLC	No Bid	No Bid
MTA Engineer's Estimate	\$458,225,774	\$159,397,968

REPORT ON  
LIGHT RAIL VEHICLES

**WILL BE PROVIDED UNDER  
SEPARATE COVER.**



# 2550 Project

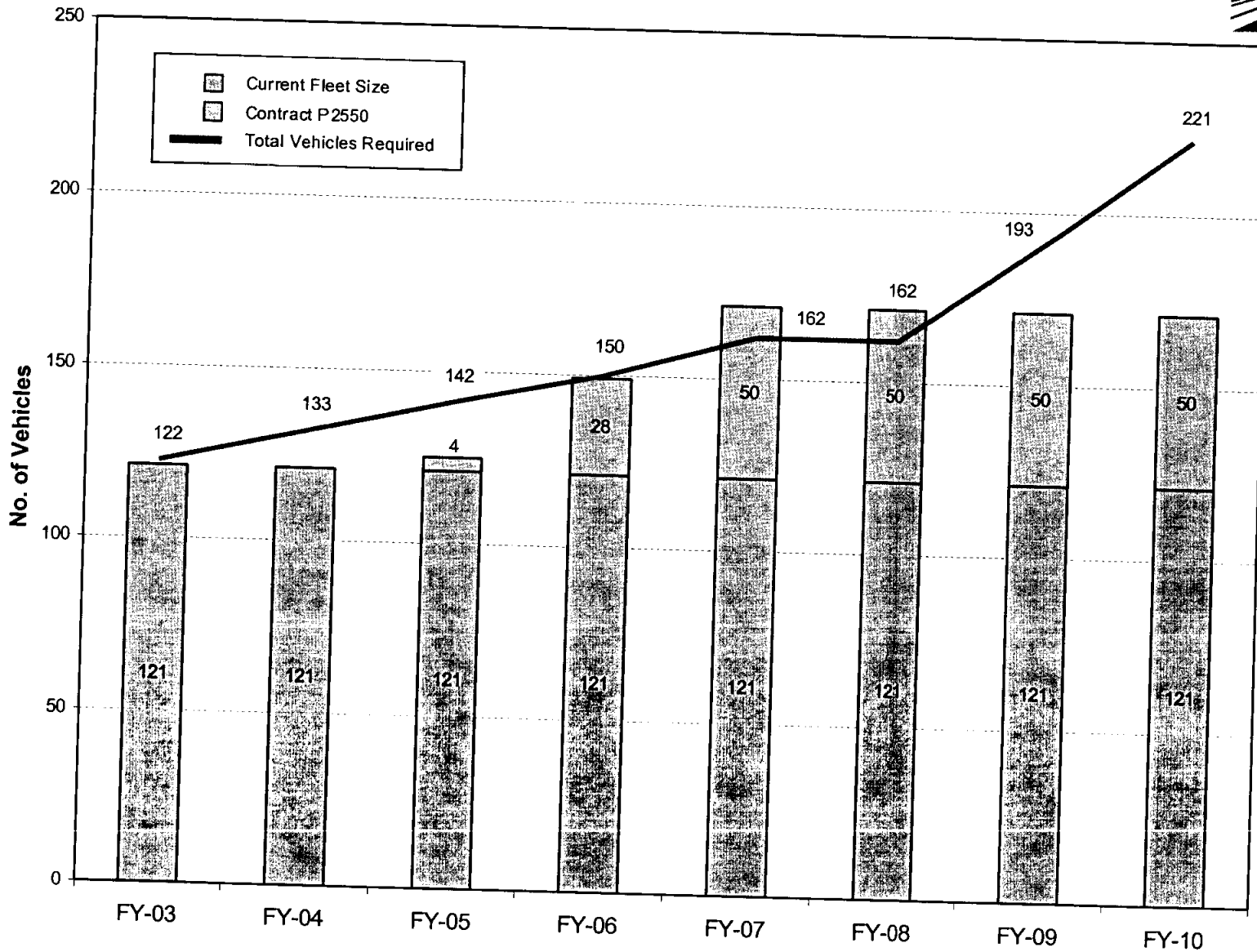


1

Item# 34 & 35



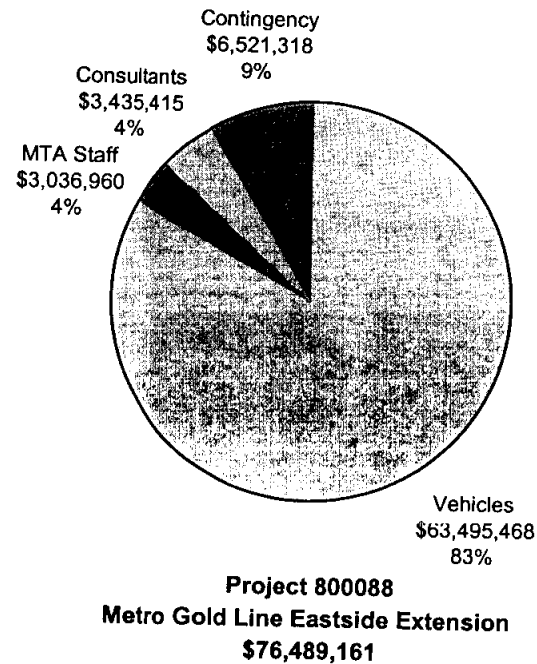
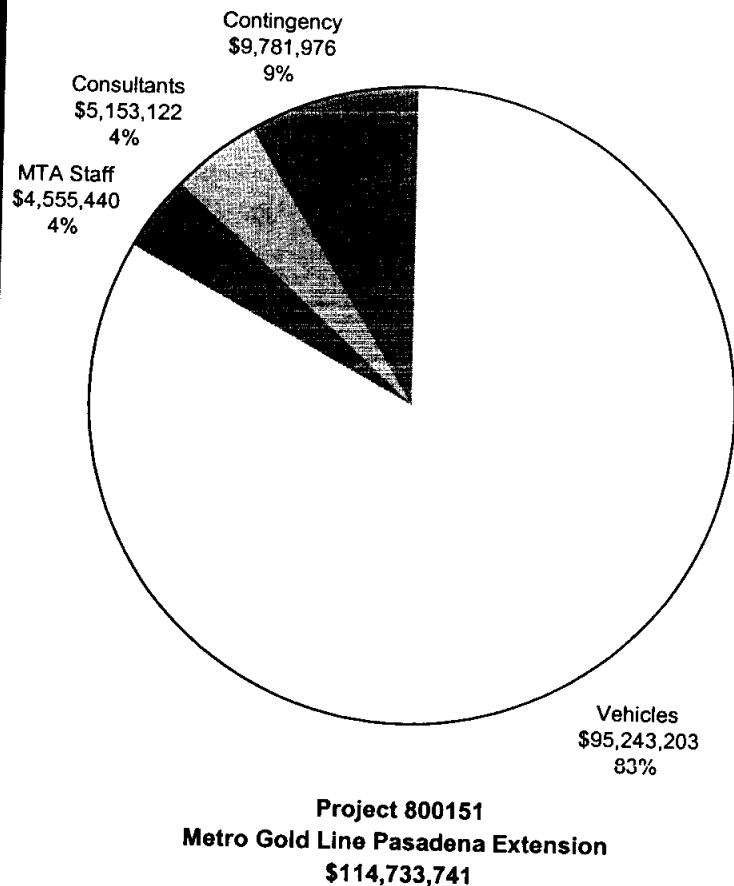
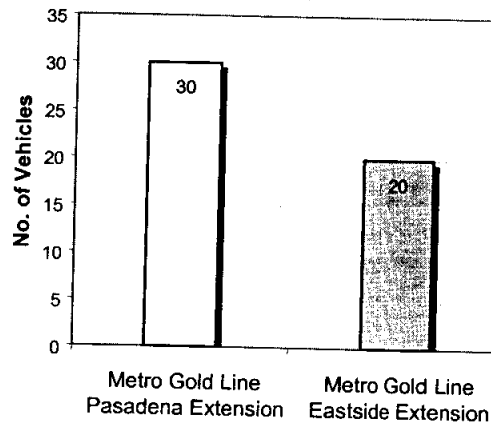
# Rail Fleet Management Plan





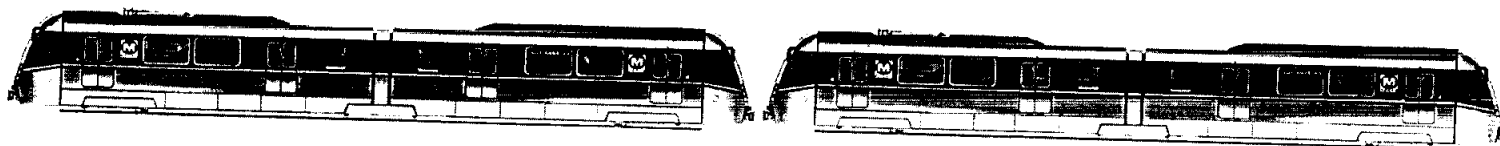
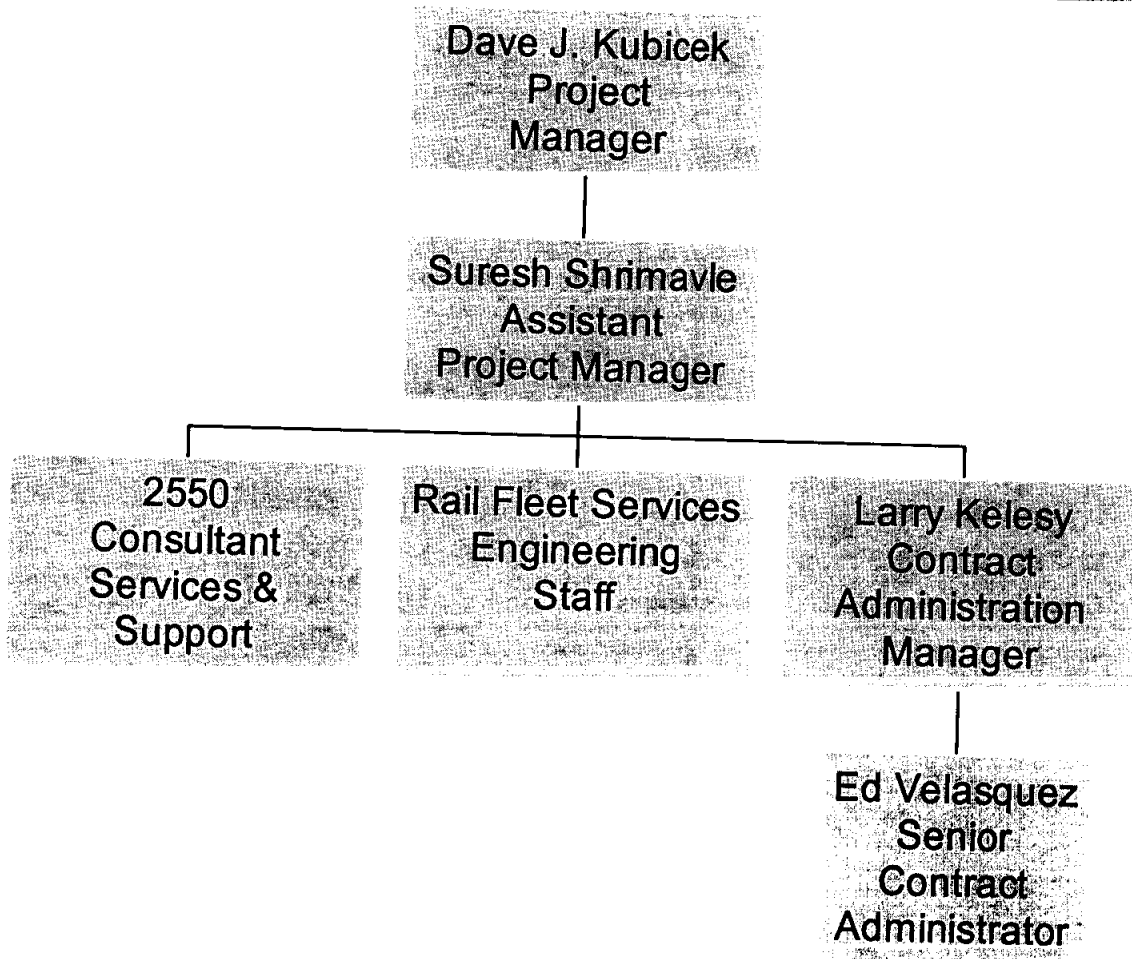
# Light Rail Vehicles - Contract P2550

## Contract Budget Breakout



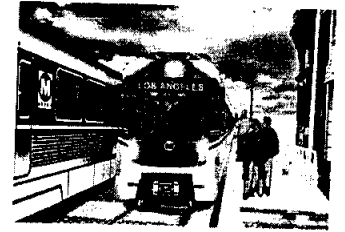


# Project Team





# Lessons Learned



- **Project Manager has experience with all types/phases of Light Rail cars.**
- **Rail cars will be capable of operating on any Light Rail line, Present or Future.**
- **Car builder responsible for compliance with all technical requirements.**
- **End users will be involved in all phases of project from start to finish.**
- **Proven technology that is compatible and reflects current rail industry standards.**
- **Consultant Services will be task specific.**
- **Integrated Project Management Team.**







# Consultant Staff Schedule - FTE's



FY2004 - 9,    FY2005 - 11,    FY2006 - 5,  
FY2007 - 5,    FY2008 - 4.

## Disciplines to be Utilized.

- \* Metallurgical Engineer
- \* Propulsion Software Engineer
- \* Braking Software Engineer
- \* User Education Specialist
- \* Production Inspectors
- \* HVAC Engineer
- \* Signal Software Engineer





# Delivery Safeguards



- Liquidated damages for late delivery of vehicles.
- Payment retention 10% of all invoices.
- Insurance requirements.
- Performance bonding requirement.
- Stringent warranty clause combined with a warranty letter of credit.

