



**OPERATIONS COMMITTEE
APRIL 15, 2004**

SUBJECT: 2550 RAIL VEHICLE PROGRAM

ACTION: RECEIVE AND FILE

RECOMMENDATION

Receive and file the quarterly report on the 2550 Rail Vehicle Program for the period from December 2003 through February 2004.

ISSUE

On April 24, 2003, the Metro Board awarded two key contracts to the Program:

- A five-year contract to AnsaldoBreda S.p.A. (AnsaldoBreda) for a base buy fleet of 50 light rail vehicles (LRV). These 50 LRV's will be utilized for both the current Pasadena Gold-Line and the future Metro Gold-Line Eastside Extension. These LRV's will also be designed to operate on any existing or future light rail alignment(s), which the Metro operates.
- A rail-consulting contract to LTK Engineering Services (LTK) for as-needed technical support to the Program.

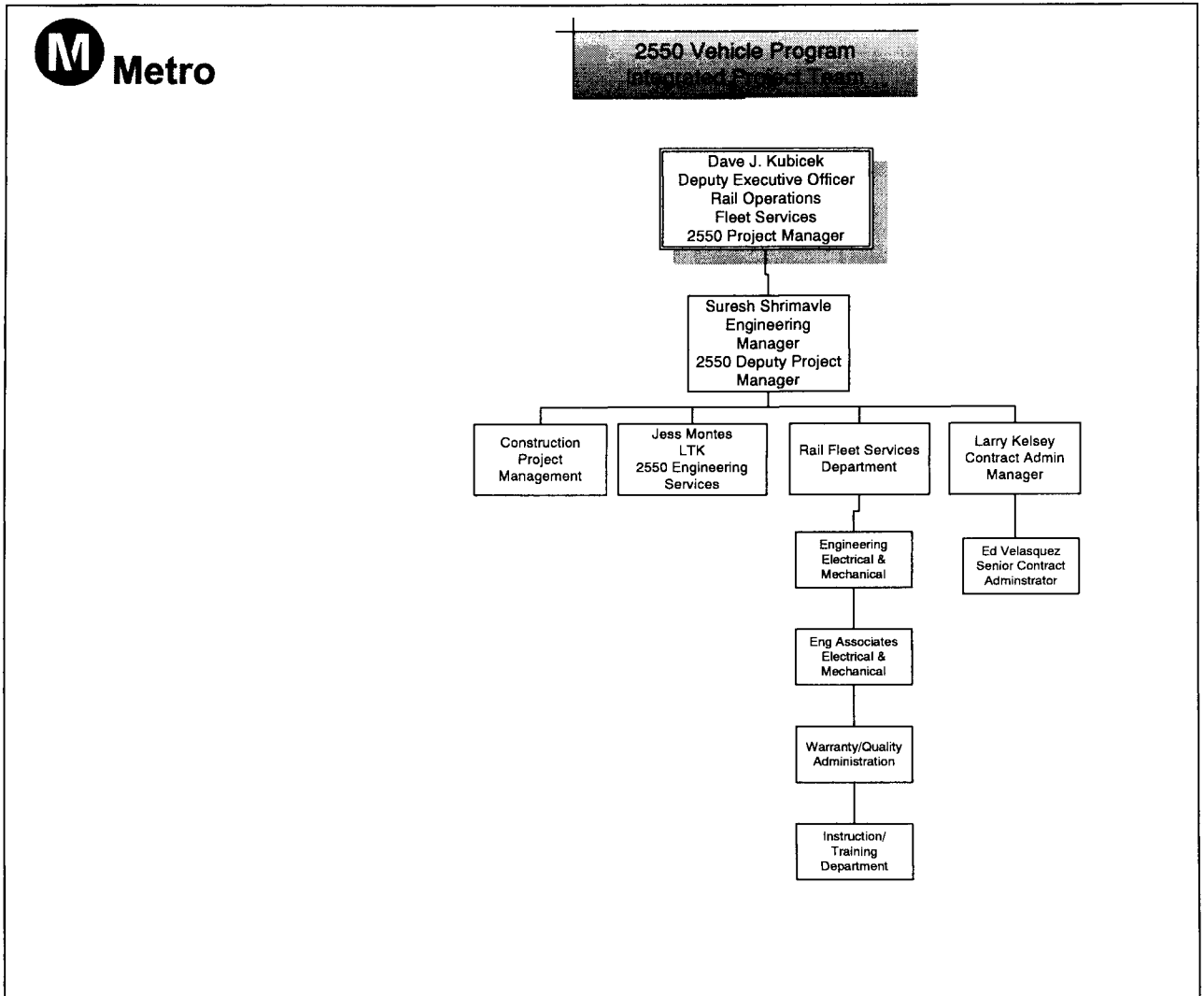
In addition, the Board directed staff to provide quarterly updates on the status of the Program.

BACKGROUND

Based on the lessons-learned from operational experience with the P2000 LA Standard Car contract, Rail Operations created an LRV Integrated Project Team (IPT) responsible for managing the Program. An IPT is established whenever a capital project of significant importance requires a very dedicated management team with the ability to act and react quickly to Program issues.

For this Program, the IPT is organized under Rail Fleet Services and consists of the Project Manager, Deputy Project Manager, Contract Administration Manager, Senior Contract Administrator and dedicated staff from other Metro departments. The IPT also benefits from the support of as-needed specialty engineering services through the Program's contract with LTK, one of America's oldest and largest rail-transportation consulting firms. The

additional engineering participation provided by LTK is an integral part of the IPT and its ability to expeditiously respond to specific engineering issues as they arise, for example, in the areas of signaling and automatic train control expertise. The IPT's primary focus is dedicated towards on-time delivery, within program budget, and on the successful integration of the systems and subsystems affecting the LRV. The IPT organizational chart is below:



Program Status

The Program now has an IPT-approved Program Schedule for all contract milestones, and submittals as well as for the LRV production and deliveries. The IPT approved schedule maintains the contract requirement to deliver 50 LRVs by June 2007. The Program now has the ability to transmit, review, comment and approve contract drawings and contract submittals electronically through the use of the internet-based "Project Quest."

"Project Quest" is an Internet program licensed to Metro for use as a program management tool. "Project Quest" provides the IPT and AnsaldoBreda with the ability to transmit contract documents including large drawings and letter correspondence almost instantaneously between Italy, New York, Los Angeles, and any other location associated with the Project. It also provides an electronic file of all 2550 Program related documentation including the contract and many reference documents that is available to the IPT, LTK, and AnsaldoBreda. The IPT controls restricted access and security for confidential files in "Project Quest", such as negotiation positions and internal memos.

From February 23rd through February 27th 2004, the IPT members from Rail Fleet Services and Contract Administration, along with LTK's project engineer, conducted a technical review and follow-up audit at AnsaldoBreda's plants in Pistoia and Naples, Italy. The IPT and support staff reviewed AnsaldoBreda's conceptual design elements. AnsaldoBreda has completed all subcontract negotiations for the major subsystem vendors for the LRVs with the exception of the wheels and axles. The IPT has identified a service-proven wheel-set that is consistent with both the contract requirements and AnsaldoBreda's original bid. The IPT instructed AnsaldoBreda to complete their negotiations and consummate a subcontract with this wheel-set manufacturer.

The IPT re-audited the recent improvements to the electronics production areas at the AnsaldoBreda Naples plant and is satisfied with the improvements. These improvements are the result of AnsaldoBreda's consolidation of the electronics assembly from several facilities and from comments and suggestions made by the IPT on its previous review of the Naples plant.

AnsaldoBreda has commenced mobilization of the Pittsburg, California assembly plant to comply with the Contract's Buy America-required final-assembly in the United States. This facility will allow the AnsaldoBreda and the IPT to more efficiently coordinate and oversee the final assembly and shipping operation between the two California locations of Pittsburg and Los Angeles.

The IPT is currently reviewing the contract submittals from AnsaldoBreda of the subcontracts for the major subassembly suppliers, the Quality Assurance Plan, the System Safety Program Plan, and certain preliminary details of specific LRV system elements. The IPT will grant approval if the submittals meet the Contract requirements.

The various activities and accomplishments of the IPT during the reporting period are designed to maintain the 2550 Rail Vehicle Program schedule to deliver 50 LRVs to Metro by June 2007.

The IPT Activities On The 2550 LRV Contract with AnsaldoBreda

Actions or Accomplishments	Month
	December 2003
1. The AnsaldoBreda Vice President and the Project Engineer present the program progress status to the IPT.	
2. The IPT conducts design and vendor reviews in New York at AnsaldoBreda U.S. based corporate office for East coast suppliers. Major sub-suppliers to include doors and signaling manufactures.	
3. The IPT conducts on-going weekly conference calls with project staff in Los Angeles, New York, Pistoia, and Naples Italy. The teleconferences discuss the status of contract submittals, reviews and approvals, specific design issues and planned activities for the week.	
4. The IPT approves the accomplishment of contract milestones 2A and 3A by AnsaldoBreda. These milestones consist of the approval of systems Engineering, Car-shell & Articulation and other drawing submittals, as well as the vehicle cross-section and dynamic clearance drawings.	
	January 2004
1. The IPT and AnsaldoBreda perform on-site vendor-signaling testing on existing Blue, Green, and Gold Lines to collect actual data baseline performance requirements for 2550.	
2. Members of the IPT complete the preliminary Finite Element Analysis (FEA) and Finite Element Modeling (FEM) for Car-Shell, Motor Truck, and Center Truck designs in Italy.	
3. The IPT conducts on-going weekly conference calls with project staff in Los Angeles, New York, Pistoia, and Naples Italy. The teleconferences discuss the status of contract submittals, reviews and approvals, specific design issues and planned activities for the week.	
4. The IPT performs on-site review and provides preliminary approval of the 2550 LRV operators cab layout with AnsaldoBreda using the full-scale operator's cab drawings at the AnsaldoBreda Pistoia Italy Plant	
	February 2004
1. The IPT commence the on-site reviews of the preliminary design for low-voltage, medium-voltage, and high-voltage systems.	
2. Members of The IPT complete the draft System Safety Certification Project Plan for review and comments in support of the 2550 program in-production and testing phases.	
3. The IPT conducts on-going weekly conference calls with project staff in Los Angeles, New York, Pistoia, and Naples Italy. The teleconferences discuss the status of contract submittals, reviews and approvals, specific design issues and planned activities for the week.	

4. The IPT conducts the operator's cab mock-up review in Pistoia, Italy. The IPT review also included Metro Rail Operations Deputy Executive Officer of Transportation and a Rail Operator who operates out of the Blue-Line currently. The IPT review covered cab integration and clarified specific requirements to drivers-seat access and clearances, master-controller location and integration, operator's control panels and gauge location, newly introduced cab flip seat design for training and supervision purposes, and general overview of basic cab functions.	
5. The IPT accomplishes project, contract, and procurement reviews in Pistoia, Italy	
6. The IPT assists AnsaldoBreda in resolving potential issues surrounding proposed and approved wheel-design manufacturers.	
7. The IPT finishes the low-voltage, medium-voltage, high-voltage, and production plant status design review in Naples, Italy.	
8. The IPT drafted the four-month look-ahead schedule for up-coming program reviews, staff assignments, and travel to support these program management efforts.	
P2550, LRV Contract Paid To Date*	
\$26,269,585*	

- As of 02/29/04

The IPT's management of the LTK consultant contract by specific task orders is resulting in consultant costs incurred that are less than the IPT's target for consultant expenditures as of this reporting period. While the level of LTK's effort will increase over the next six months due to final design reviews and on-site inspection, the IPT is presently forecasting that the LTK consultant costs will remain under the original forecast target of \$2.1 million for FY2004.

LTK Activities Through Its PS 8310-1267, Rail Consulting Contract with Metro	
Actions or Accomplishments	Month
1. Participate in all weekly IPT technical meetings. These are the in-house meetings to discuss status and Metro technical positions prior to the weekly teleconferences with AnsaldoBreda.	December 2003 Through
2. Participate in all weekly 2550 Program technical teleconference calls with AnsaldoBreda. LTK's technical expertise in certain areas, such as systems integration and electrical systems, is a beneficial augmentation to the IPT's expertise.	
3. Review and provide comments and recommendations to all AnsaldoBreda technical submittals. LTK's technical expertise is especially valuable in the review of certain technical documentation from AnsaldoBreda.	
4. Attend and participate at meetings with AnsaldoBreda in Los Angeles. LTK's experience with previous Metro LRV procurements provides insight into lessons-learned.	
5. Attend and participate at meetings with AnsaldoBreda in Pistoia and Naples. LTK's experience with other LRV manufacturers is a valuable asset to the IPT.	February 2004
PS 8310-1267, Rail Consulting Contract Paid to Date*	
\$374,167*	

- * As of 02/29/04

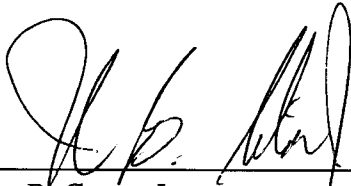
NEXT STEPS

The IPT and AnsaldoBreda will be conducting final design reviews ahead of the contract schedule during the next three months of March, April, & May 2004. During this period the IPT will also be conducting site reviews of all AnsaldoBreda production facilities in California and Italy, involved in constructing and supporting the 2550 rail vehicle.

Production and assembly lines are being established in support of construction of the new rail-car fleet. Presently structural floors, sidewalls, and roof designs are going through the production line using automated cutting, welding, and assembling procedures. Present efforts are used for calibration and verification of the previously mentioned equipment. There will be on-site inspectors provided by specific LTK task order to verify the utmost quality and attention to detail is applied during all phases of LRV assembly, from April 2004 until completion.

The Contract Document Requirements List (CDRL) submittals from AnsaldoBreda will continue and the IPT will review and comment or approve. The IPT continues to communicate on a daily basis and conduct full team meetings at least once a week to discuss issues, schedules and milestones.

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