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Metropolitan
Transportation
Authority

TO: BOARD OF DIRECTORS

FROM: RICHARD HUNT 
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SUBJECT: METRO RAIL ESCALATORS

There are 122 escalators and 86 elevators throughout the Metro Rail system. Most of this equipment is used on the Red Line. An outside contractor, Mitsubishi Electric, maintains the equipment under a multi-year contract that was awarded in November 2000. The contract is an all-inclusive agreement that requires the contractor to perform all required maintenance and repair services to keep the equipment running in a safe and reliable condition.

The contract requires Mitsubishi to repair inoperable elevators and escalators and return them to service within 24 hours for minor repairs and within 72 hours for any major repairs. Mitsubishi has been unable to consistently meet this requirement on all equipment, primarily due to difficulty in obtaining parts from the Original Equipment Manufacturers (OEM's) in a timely manner. This has been a problem with the Civic Center Station escalators.

Red Line escalator availability to the public during the past 14 months averaged 97%. The high level of recorded down time was mainly due to the escalator at the Civic Center Station, which was down for nearly a year due to a catastrophic bull gear failure. The required parts were not readily available from the OEM and had to be custom built. The unit was finally repaired and returned to service on August 15, 2001. Temporary shutdowns of this specific escalator that have occurred since August were due to vandalism (activation of the emergency stop button).

As required by contract, Mitsubishi must conduct an annual teardown and refurbishment of each escalator in the system. We directed them to focus on the older escalators, in the MRL Segment 1. This annual maintenance has been taking much longer than anticipated due to the age of the equipment and preexisting conditions not corrected by the previous contractor. When the contractor takes a unit out of service for inspection and repair, to minimize passenger inconvenience, we ask them to redirect the remaining unit to run in the up direction.

As of today, out of the 89 escalators in the Red Line system, only one unit (escalator #9 at Wilshire/Vermont) is out of service for unscheduled maintenance. This escalator has been out of service since April 23, 2001 due to damage caused by an automobile accident that destroyed the escalator's upper section. Due to the long lead-time required in manufacturing and delivering the necessary parts, we anticipate that it will be out of service until January 2002. Two (2) escalators are out of service for scheduled maintenance. They are #207 at Civic Center and #2 at Wilshire/Western. We anticipate returning these two escalators to service on October 16th and October 1st respectively.

The vast majority of unscheduled escalator shutdowns are caused by misuse, tampering or vandalism (activation of the emergency stop button). When an escalator shutdown is reported to the Rail Control Center, maintenance personnel are immediately dispatched to restore service. The maintenance crews conduct daily inspections of the escalators and elevators throughout the system. In addition, MTA staff operationally inspects Segment 1 escalators at least once a day.

In order to improve equipment availability and reliability, we have hired an elevator/escalator consultant to help the MTA with maintenance quality assurance to ensure that the contractor is performing all contracted maintenance requirements. We also plan to pursue the possibility of using SCADA as a remote monitoring tool to alert MTA Operations when elevators or escalators go out of service.