

Moving Metro Forward on Safety

July 2010

Metro's top priority is safety. Over the last year, Metro has taken a number of actions to improve safety for its customers and employees, including the following:

- Procured, developed and installed equipment to improve safety
- Implemented NTSB and oversight group recommendations
- Developed new procedures to prevent safety risks
- Rebuilt and expanded its Safety Department
- Improved protection of track workers
- Expanded training for the workforce
- Reinforced the urgency of safety system-wide for every employee
- Established processes to measure progress

Metro has acquired and ordered new, improved equipment to make the system safer for riders and employees.

Metro is updating its equipment and facilities through repair or replacement to bring the system to a constant state of good repair, and thus a safer place to work and travel.

- Approximately \$200 million in federal and jurisdictional funding was invested to make needed equipment and facility repairs.
- The Board of Directors approved a contract to build new generation rail cars (7000 series) that will allow Metro to address its top safety priority—the replacement of the 1000 series cars, which are the oldest cars in the fleet. The new cars will feature advanced crashworthiness technology.
- Added levels of review and technology that support the train control system. Further enhancements will be deployed at the end of calendar year 2010.
- Metro continued the installation of rollback protection to its rail cars to provide an additional layer of safety for rail and maintenance operations. All 1000 series rail cars are expected to be complete by the end of July 2010.
- Metro began the implementation of the Red Line Rehabilitation Project to repair deteriorating platforms and well-worn escalators and elevators to bring them into a state of good repair, which will in turn improve customer safety in Metrorail stations.
- Metro hired a consultant to provide guidance on issues associated with escalators and elevators.
- Metro replaced 148 older buses (using ARRA stimulus funds) to lower the age of its bus fleet, which improves reliability and also decreases equipment failures and inherent risks of operating older vehicles.
- Metro installed DriveCam in all dedicated MetroAccess vehicles and signed a contract to install the safety system on Metrobuses to help serve as a teaching tool and monitor for bus and MetroAccess vehicle operators.
- Metro and its cellular phone partners completed underground cellular signal availability to improve cell phone connectivity in select stations, which makes cell phone service

more reliable as a customer amenity as well as to simplify a call for assistance during any possible emergency.

- Metro signed a contract for a firm to build a “Geometry Vehicle” that will be used for inspecting tracks in the system so that they are kept in a state of good repair and can provide for safe train passage.

Metro has worked proactively and cooperatively with key oversight organizations, including the National Transportation Safety Board.

- Over the last six years, Metro closed 196 of 256 corrective action plan items to address safety issues raised by oversight groups, including the Federal Transit Administration, the Tri-State Oversight Committee and the National Transportation Safety Board.
- The Safety Department increased reporting of safety-related incidents, beyond what is required, to the Tri-State Oversight Committee, to promote transparency and strengthen the transit agency’s relationship with its oversight body.
- Retained an independent adviser to assist with FTA and TOC audit recommendations.
- Metro took the following specific actions to comply with NTSB recommendations:
 - Metro positioned its oldest rail cars (1000 series cars) between newer series cars in its train consists, until further notice, so that the newer rail cars could help absorb the impact of a potential collision.
 - Changed operation of trains to manual mode, while a real-time track circuit monitoring system is being developed.
 - Established a test procedure to identify track circuits susceptible to parasitic oscillation. This response is being reviewed by the NTSB.
 - Establishing a program to identify rail operators who are at a high risk for sleep apnea or other sleep disorders. This response is being reviewed by the NTSB.
 - Established a new standard for the maintenance of rail car wheels.
 - Revising procedures to ensure sufficient coordination between all department responsible for rail car maintenance and engineering design to proactively identify and resolve issues before new equipment is introduced.
 - Revising procedures to require that the Chief Engineer of Vehicles reviews and evaluates all proposed safety related improvements affecting rail vehicles.
 - Installed guarded switches at 114 of 178 locations to decrease risk of train derailment. Plans call for the installation of guarded switches at each of the 178 locations by the end of FY2012. This response is being reviewed by the NTSB.
 - Additionally, Metro developed a comprehensive rail lubrication procedure that ensures close coordination between the operations and track engineering departments to ensure timely and appropriate rail lubrication is applied during normal and single-track operations.

Metro has established processes and taken other actions to prevent safety problems by identifying risks in advance

- Metro established an anonymous safety hotline to encourage the reporting of possible safety issues.
- Metro has crafted a new, stronger whistleblower protection policy so workers feel more secure about reporting safety issues.

- Staff is developing a new safety tracking system that provides a comprehensive view of all safety-related incidents, tracks the progress of incident investigation, and monitors status of corrective actions.
- Metro called on an external safety panel of experts to help evaluate operational practices and procedures.
- Metro raised the standard for acceptable track circuit performance.
 - Engineers now review track circuit information twice daily, and if a circuit fails to meet the new standard, a crew is dispatched to inspect and repair the circuit.
- Metro implemented more frequent and stringent track monitoring to identify and repair potential problems.
- Metro has designed a pilot program for the track area between the Gallery Place and Judiciary Square Metrorail stations that will use lights to signal train operators that there are workers on the track ahead, and will also alert track workers if a section of track is being returned to normal operation.

Metro has strengthened and expanded the Safety Department.

A new leader in safety and additional staffing to cover a wider array of safety issues has improved the focus and scope of Metro’s Safety Department. Metro has taken the following steps:

- A new Chief Safety Officer, reporting directly to the General Manager was hired to provide the Safety Department with strong leadership and direction based on his more than 25 years experience in the field.
- Metro expanded staffing within its Safety Department by 12 positions to 43. The collective experience of the staff brings 230 years of experience in safety, incident investigation, training, quality assurance, industrial hygiene, and environmental management.
- Personnel were assigned regionally to new safety positions at each bus and rail division where they help identify and correct safety concerns at the earliest stages.
- Scrutiny of rail safety increased with the assignment of additional Safety Department personnel responsible for conducting rail system safety checks.
- Oversight of evening rush hour operations increased safety personnel working until 7 p.m. weekdays.
- Patrols by bus supervisors increased with additional communication now taking place with bus operators, which enables quicker response to address service and safety issues.

Metro has focused on strengthening the work environment to protect the well-being of its track workers and all other departmental staff who conduct work in the track right-of-way.

Metro’s Rail Department increased emphasis on right-of-way (ROW) safety by implementing several initiatives to help make the track work environment safer for individuals whose jobs require them to work in the ROW. Examples of actions taken include:

- Increased surveillance of ROW worker activities and operator actions to ensure full compliance with existing rules and procedures.

- Established a Roadway Worker Protection Working Group to provide oversight of analysis and resolution activities relating to ROW safety issues.
- Drafted a new comprehensive track safety manual to identify technologies and processes for promoting a safe and efficient work environment. This manual meets American Public Transportation Association program standards for roadway worker protection.
- Reached out to other transit agencies and rail transportation companies, as well as the Tri-State Oversight Committee and labor representatives, to develop best practices for improving safety. Agencies included New York City Transit, U.S. Department of Transportation, Federal Transit Authority, Federal Railroad Agency, Maryland Transit Administration, Bay Rapid Transit, Utah Transit Authority, Southeastern Pennsylvania Transit Authority, Amtrak, Consolidated Rail Corporation, Toronto Transit Commission and Port Authority Transit Corporation.
- Visited other transit railroads to sample and learn best practices first-hand and expand Metro staff's knowledge to be applied at Metro.
- Identified a single work zone leader before beginning a task in the ROW that serves to provide workers with a single focal point for guidance.
- Established an aggressive investigation focus in the event of any alleged retaliation against employees who report safety violations to help develop a non-threatening environment where identifying unsafe practices is encouraged.
- Enforced a progressive discipline policy for violators of safety procedures that is consistent with current collective bargaining agreements to hold all employees accountable for their actions.
- Created a requirement that all train operators repeat instructions back to the Rail Operations Control Center to help ensure accurate message delivery.
- Clarified the definition of the term "clear" as used in special orders, procedures and rules to reduce confusion and risk of accidents and incidents.
- Sought and received input from track workers and train operators on issues in an effort to collect specific recommendations to improve safe operation.

Metro strengthened its employee safety training program

Metro expanded its safety training program to fill gaps and add redundancy to ensure that the workforce is proficient on the job and that all training elements include a greater emphasis on safety. Examples include:

- Safety Department staff has completed three of six specialized training classes at the Transportation Safety Institute, an arm of the U.S. Department of Transportation, to better prepare them to more safely operate, maintain and manage in the transit environment.
- Based on feedback from National Transit Institute of Rutgers University and the Transportation Safety Institute, Metro enhanced its safety training.
- Safety training was revamped to include real hands-on scenarios and experiences to better prepare workers for actual emergencies.
- Metro required track workers to complete a new phased training program and yearly retraining and requalification process to ensure workers are thoroughly trained and remain proficient in their duties in a safety-focused work environment.

- Track workers began to be retrained on proper use of hand signals to ensure workers are able to safely and accurately communicate commands to each other in work settings where hearing can be limited by noise and distance.
- Implemented revised 30-, 60- and 90-day training performance reviews for newly certified train operators to ensure that they met Metro's standards for safe operations and customer service.
- Bus training instructors took a nationally recognized Smith Systems Defensive Driving training course for training and certification in defensive driving techniques to be able to apply that knowledge to their training efforts of Metrobus operators.
- MetroAccess developed a pilot training program for its vehicle operators that formalized every facet of an operator's duties, from safely operating the vehicles to safely boarding and exiting customers from vehicles.

Metro has communicated to the workforce on the urgency of safety and safe conditions within the workplace.

Metro has increased internal and external communications, which has helped identify issues and solutions before they become major problems. Examples include:

- A safety culture survey is being conducted of all Metro employees to understand workforce safety awareness and establish a benchmark from which to measure improvement throughout the authority.
- Retained an independent consultant to complete an independent assessment of Metro's safety culture.
- Safety officers were assigned regionally to bus and rail divisions to improve communications by relaying safety concerns from operational personnel directly to the Safety Department.
- General Manager regular Safety Action Report meetings were implemented between the General Manager and front-line superintendants to increase and accountability on safety issues.
- New safety signs were posted at bus and rail facilities to help remind workers about the need to integrate safety into every task, every day.
- Metro officials increased communication with its largest employee union on safety issues and initiatives to promote safety as mutually beneficial to workers, management and riders.

Metro raised its performance and safety standards

Metro raised its standards by digging into its vital operating processes and measuring its performance in operations, which translates into a safer operating environment. Examples include:

- Metro has completed an extensive revision of its Metrorail Safety Rules and Procedures Handbook, which governs safety for the entire Metrorail system.
- Metro developed a Vital Signs Report to provide a single source assessment of its performance for review by internal personnel and the public that focuses on safe and reliable operations.
- Inspectors increased inspection of emergency trip stations, conducted more preventive maintenance inspections and documented all inspections.

- Supervisors placed a greater emphasis on safety awards programs to recognize employees who demonstrate safe work habits or make significant contributions to the agency's safety program.