

**The Tri-County Metropolitan
Transportation District of Oregon
(TriMet)
Portland, OR**

**Technical Memorandum
System Safety On-Site Assessment**

July 31, 2010

**K & J Safety and Security Consulting Services, Inc.
3257 Elcano Lane
Cantonment, Florida 32533**

INTRODUCTION

At the request of TriMet, K & J Safety and Security Consulting Services, Inc. (K & J) conducted Phase II of its safety review including: reviewing the proceedings of a Transit Change Review Committee (TCRC) meeting (June 11, 2010) and Bus (June 18, 2010) and Rail (June 21, 2010) Accident Review Board meetings. Phase II of the safety review consisted of an on-site safety assessment which was performed from July 7-9, 2010. This on-site assessment included interviews with key staff members and review of current TriMet documents, programs and select bus stops and rail facilities. Additionally K & J devoted time to assessing the acquisition and utilization of new safety technologies for both bus and rail operations such as rear facing turn signal indicators, lights to illuminate crosswalks, rear facing video cameras, uncouple button covers and operator compartment convex mirrors for right and left side viewing.

The documents reviewed for this project included:

Light Rail Transportation Training Department Documents

- Operator Observation Rides – Routine Report
- Operator Observation Rides – Week One Report
- Operator Observation Rides – 30 Day Report

Type 4 Convex Mirrors and Arm Rest Document
LRV Console Uncoupling Switch Cover Document
Bus Stops Guidelines

The following TriMet personnel were interviewed by the K & J team (J. Tucci and K. Lyons) as part of this assessment:

Neil McFarlane, General Manager
Tom Walsh, Former General Manager
Shelly Lomax, Executive Director, Operations
Denis Van Dyke, Interim Director, Operations Support
Kurt Wilkinson, Senior Safety Specialist
Jim Strickland, Assistant Manager, Rail Transportation
Allen Morgan, Manager, Operations Training
Tom Nielsen, Director, Maintenance Operations, Bus/Rail Maintenance
Stewart Jolliffe, Training Supervisor
Barry Tillson, Assistant Manager, Transportation
Mary Hansen, Bus Training Supervisor
Brooke Taylor, Supervisor, Drug and Alcohol Program
Ryan Poehler, Safety Specialist
Jeff Ackerson, ATU Local 757, Executive Committee, and Bus Operator
Amy Taylor, Rail Operator
Tommye Gilbreath, Manager, Safety
Kerry Ayres-Palanuk, Manager, Service Planning

James Hergert, Manager, Scheduling
Josh Collins, Manager, Operations Communications

The following sites were inspected during the site-visit segment of the assessment:

- MAX station enhancements to protect pedestrians at the grade crossing east of the Civic Drive station in Gresham
- Ruby Junction – tour of Bus Dispatch and Rail Operations Control Center
- Sampling of bus stops and routes that were evaluated as part of TriMet's Line-by-Line evaluation performed by the Training and Field Operations departments.
 - SE 17th Ave and SE Umatilla St – Reviewed "Yellow Card" from bus operator regarding bus stop
 - Collins Circle, Line 6-Martin Luther King Jr Blvd: Bus layover
 - SW 3rd Ave and SW Main St: Bike box
 - SW 10th Ave and SW Columbia St: Illustrated bike/bus interactions
 - SW 6th Ave and SW Oak St to SW 6th Ave and W Burnside St: Stops on the downtown Portland Transit Mall
 - SE Grand Ave and E Burnside St: Bus stop in the lane of traffic
 - Hawthorne Bridge: Bus stop close to bike path, connection to OMSI
 - Downtown Portland: Multiple bus stops demonstrating placement of stops for buses and trains
 - Line 70-12th Ave: Multiple locations with stops every few blocks

SAFETY ASSESSMENT

FOCUS AREAS

Bus Operations

Stewart Jolliffe of Operations Training discussed the recent “Line-by-Line” evaluation that was conducted to determine the safety of the current location of bus stops and shelters throughout the entire TriMet bus system, and the legality of required vehicle movements to serve those stops. TriMet initiated this major undertaking following the April 24 fatal accident. It is unique among transit agencies in that most agencies do not assess bus stop location for the presence hazards. If a stop was determined to be legal (with input from TriMet General Counsel) it was further evaluated to ensure it was also safe. One of the ways in which ongoing evaluation of bus stops is facilitated is through “Yellow Cards,” which is a method by which bus operators can report observed hazards to the Training Department and the Safety Department and scheduling or route conditions to the Field Operations and Service Planning & Scheduling departments. Bus operators can also call the Training Department or the Safety Department to report concerns and hazards. Customer complaints regarding bus stops and hazards are also forwarded to these departments, which meet regularly to discuss concerns, issues and hazards.

There was also a discussion about bus operator training with Mr. Jolliffe. Trainees are assigned to a specific trainer and the trainer follows that operator throughout their initial training of six weeks. Nearly every operator is given a check ride every two years, although the objective is one check ride per year for each operator. Refresher training is provided to operators returning to work after a 30-day absence.

Mr. Jolliffe then took the K & J team, along with Tommye Gilbreath, manager of safety, on a field inspection of the bus stop locations listed on Page 3. This inspection provided K & J with a better understanding of the process that the Safety and Training departments use to evaluate the hazards associated with bus stops. It also afforded the team some insight and appreciation of the challenges that bus operators face on a daily basis.

Mary Hansen, bus training supervisor, was interviewed regarding new hire bus operators. The new bus operator training curriculum is under-going review and revision. The existing course curriculum was last comprehensively updated in 2005 and was developed from various sources, including: the Smith System, Strategies Program training courses, American Public Transit Association (APTA) and other industry best practices. Additional material and skills taught are based on the Americans with Disabilities Act (ADA), State of Oregon commercial driver’s license standards, TriMet policies as well as years of accumulated knowledge and experience by the TriMet Training Department.

Findings:

1. A significant deficiency has been identified regarding bus rules and procedures. TriMet's Bus Operator Standard Operating Procedures (SOPs) (May 10, 2010 version) combined the bus operating rules and procedures into one document. However, new or veteran operators have not been provided formal training on the Bus SOPs. Over the years there has been a change from a Bus Rulebook to a Bus Operator's Guide (BOG) to Bus SOPs without effective document or configuration control. Because there is no annual recertification training for bus operators, there is no established plan for providing ongoing Bus SOP training. According to more than one person interviewed by K & J, the only method of distribution is haphazard in that during check rides, the operators are provided the SOPs pertinent to any deficiency identified during the check ride. TriMet does have a well-established Operator Professional Development (8 hours of training annually) training program as well as frequent training bulletins that are provided to operators. Neither of these programs constitutes refresher or recertification training as they currently exist, however TriMet is moving forward with the development of a formal bus operator recertification program.

This issue was also discussed with Jeff Ackerson, bus operator and executive committee member of the Amalgamated Transit Union (ATU), Local 757. Mr. Ackerson expressed serious concerns over the SOP distribution process, indicating that the preferred method of TriMet is distributing the SOPs to bus operators electronically. There is a computer kiosk in each operator's reporting or lounge area where they can access the SOPs. However, there is no way of determining who has downloaded the SOPs and no way of knowing how many bus operators are "computer challenged" and do not know how to access the SOPs. An additional point of significant concern is that electronic access to the SOPs makes it difficult to ensure that an operator has the latest controlled copy of the SOP. Another concern is how bus operators can be held responsible and accountable for adhering to SOPs that they have not been provided, not signed for and when they have not been provided the required training on the SOPs.

2. TriMet's bus stop and shelter evaluation program is unique in the transit industry. The process is comprehensive and well documented. This serves as a model for the industry to ensure that stops are evaluated using hazard analysis and a risk assessment process. New bus stops are evaluated prior to being established. However, it must be noted that during our sampling of bus stops, there was a difference between what is detailed in the TriMet Bus Stops Guidelines and what we saw in the field. This can be attributed to the difficult challenges of an operating environment that does not fit perfectly into a design manual. TriMet should continue the best practice of evaluating bus stop location and placement.

Additionally, TriMet should revise and update the Bus Stops Guidelines to address as many of the unique operating conditions that it can.

Recommendation:

- A. TriMet should establish a process for effectively distributing its Bus SOPs and provide the necessary training to ensure that bus operators know and understand the content and applicability of the Bus SOPs.

Bus Procurement

K & J met with Barry Tillson, assistant manager of training, to discuss bus procurement. TriMet makes considerable efforts to maintain pace with technology in its bus procurement process to ensure the safety and security of its customers and operators. TriMet buses, most of which are New Flyers, include:

- GPS based automatic vehicle locator system (AVL);
- Seat alarm which sounds if the operator leaves the operator’s seat without first setting the parking brake;
- Message display unit, called the vehicle control head (VCH), which is part of the Bus Dispatch System (BDS).
- Rear facing mirror based turn signal indicators (see picture below right).
- Front and rear wheel turn lights that provide illumination of crosswalk areas while turning (see picture below left).
- Rear facing cameras on both the operator’s side and the curb side.



Photos courtesy of TriMet.

On the VCH there is an emergency alarm button which notifies Dispatch that police, fire and rescue services are needed. Also, via the VCH, messages can be sent to an individual bus or to all buses. At the time of departure from the garage, each operator is given a card that inserts into the VCH at the beginning of the shift and stores data of bus functions throughout the shift. These cards are downloaded at the end of the shift.

On the newest buses, the 2900 series, there are Engine Control Units (ECU) and Engine Control Modules (ECM) that record several key engine and transmission functions.

We found several industry bench mark activities during this section of our analysis. The rollaway seat alarm, turn lights, rear facing turn indicators and ECU/ECM features are noteworthy achievements that support the agency safety and security initiative.

Findings:

3. Although there is a Bus Procurement Committee, the Safety Department does not participate on the Committee. There is a maintenance acceptance process that addresses several safety and security related features for new buses; however, there is no Safety Certification process for buses.

Recommendations:

- B. It is recommended that a member of the Safety Department be part of the Bus Procurement Committee to ensure that safety and security requirements are included in the bus specification and contract.
- C. It is recommended that, in addition to the effective and comprehensive maintenance and operations acceptance process for new buses, that all new buses be subject to a safety and security certification process.

Safety Certification

TriMet has a well established and well managed safety and security certification (SSC) program for facilities, equipment, light rail vehicles (LRVs) and systems. Currently, TriMet does not have a program in place to certify buses. K & J met with Kurt Wilkinson who explained the SSC program. Currently, there are two major projects that will require safety certification: the Portland-Milwaukie Light Rail project and the Columbia River Crossing extension of the MAX Light Rail System. There are two Safety Department staff members assigned to safety certification; generally one person to each of the major projects. These two employees are also responsible for the safety certification of other TriMet projects such as those funded by the American Recovery and Reinvestment Act (ARRA) and all maintenance projects that are not “replacement-in-kind” projects.

The two Safety Department personnel assigned to safety and security certification are also assigned construction safety responsibilities for the Portland-Milwaukie Light Rail and Columbia River Crossing projects. These responsibilities will include monitoring the effectiveness of the projects contractors' employee safety programs.

Findings:

4. A major revision (10.0) of the TriMet Design Criteria was completed in January 2010. A significant accomplishment of this revision was identifying and highlighting items in each section of the Design Criteria document which require safety and security certification. In this way, the safety certification elements are embedded in each system. All issues pertaining to the Americans with Disabilities Act (ADA) require safety certification.
5. Unique hazards that are identified in the design and/or construction phases that cannot be completely resolved by an engineering mitigation are transitioned by the Safety and Security Certification Review Committee (SSCRC) to Operations, which would then address the hazard as an operational hazard. One method of further mitigating the hazard is by developing a Standard Operating Procedure (SOP) and incorporating it into the Rail Standard Operating Procedures and into the appropriate rail operations or maintenance training program. The Safety Department would then track this hazard to closure.
6. Contractors on certain major projects are required to have dedicated and qualified full-time construction safety supervisors.
7. TriMet pays for 100% of contractors' employees' workers' compensation for the Portland-Milwaukie Light Rail and Columbia River Crossing extension projects. This can create a potential tenuous financial position for TriMet if constant and focused attention is not provided on construction safety.
8. As previously indicated in the section above, there was no indication that buses are subject to safety certification.

Recommendations:

- D. The highlighting of safety and security certification requirements in TriMet's Design Criteria Manual is an excellent enhancement to the overall document. In addition, it is recommended that in the next revision, that the highlighted safety and security certification requirements also be compiled into a separate Safety and Security Requirements Chapter in the Design Criteria Manual. This would provide architects and engineers a comprehensive source of those elements that are subject to safety and security certification and would assist in ensuring that all of these requirements are incorporated into project designs. Additionally, it would

elevate the significance of safety and security by having a dedicated chapter in the document.

- E. TriMet should evaluate the feasibility of having dedicated TriMet safety staff assigned to monitoring contractors' construction safety programs in lieu of having the current staff perform both this function and the certification function. Because TriMet pays for the contractors' workers' compensation costs, in addition to enhancing project safety, dedicated construction safety staff would also help protect TriMet's investment by providing closer monitoring of contractors' safety programs. This would also allow the current Safety Department staff to focus on safety and security certification on the two major light rail projects and other projects. Additionally, TriMet should develop contractor requirements that establish the minimum qualifications necessary to fulfill the duties and responsibilities of the position of construction safety supervisor. If TriMet elects to continue to have TriMet safety staff perform both construction safety duties as well as safety certification duties, then additional safety staff is needed.
- F. As stated in Recommendation C, TriMet should include buses in the safety and security certification process.

Rail Operations

The K & J team met with Jim Strickland, assistant manager of rail transportation. Mr. Strickland explained the safety critical nature of the Automatic Train Stop (ATS) system. The current vehicle configuration of TriMet LRVs is such that controls (in the form of "seals") are in place to ensure that this safety critical system cannot be "cut out" or otherwise "by-passed".

There was a discussion about the rail operator training program, which consists of seven weeks of training with three weeks of classroom and then operating in the yard with a trainer. In the fourth week the trainee operates with a trainer present on the mainline during non-revenue time periods. The fifth week consists of troubleshooting practices. The sixth and seventh weeks involve operating the train, with a trainer present, during revenue hours.

There are usually two rail operations classes held per year, but due to service cuts, there has not been a class in 2010.

Once the trainees graduate from the course and are assigned to revenue operations there are follow-ups to evaluate their progression as new rail operators. Operator observation rides are performed by the Training Department after one week in service and after 30 days in service. If deficiencies are noted the rail operator is provided additional instruction to correct the deficiency.

All rail operators are observed as they operate a train, by rail field supervisory staff at least once per year. These observation rides can last up to two hours as necessary. The Operator Observation Ride form is completed for each rail operator. Retraining is provided as necessary.

There is a rail operator annual recertification program that covers basic safe operations principals like signal indication and switch point positioning. Each operator is provided a minimum of 3.5 hours refresher training per year as part of recertification.

A rail operator, Amy Taylor, was interviewed via a conference call. Ms. Taylor indicated that rail operators are provided rule books, appropriate training and are required to have the rule book on their person when on duty. Ms. Taylor also described check rides where operators are observed while operating the train. She indicated that if there are deficiencies identified the operator would be required to have training to correct the deficiency.

Findings:

9. As noted above, the Rail Operator Training course consists of seven weeks of training. After discussions with several members of the training department, it was determined that an additional week (extended to eight weeks) of training is needed to provide the Training Department time to address additional training needs. These needs include spending more time on current training subjects as well as developing several new ones.
10. During the interview it was observed that the Training Department is very involved in an ongoing manner with the rail operators to address incidents and issues to enhance operations and prevent incidents. An example is the opportunity and request for feedback from rail operators regarding the effectiveness of modifications to equipment in the Type 4 Light Rail Vehicle.
11. Reportedly, a disconnect may exist between the correction of hazards and training rail operators on them. This was mentioned in reference to the installation of convex mirrors on the front pillar of the Type 4 Light Rail Car, but when we interviewed several rail operators, they indicated that they do not use the mirrors because they instead rely on the rear-facing camera monitors.
12. The annual observation rides for all operators, annual rail operator training and the documentation of the results are considered benchmarks in the industry. For the most part, at other transit agencies these activities are either not performed at all or only portions of these activities are performed.
13. All rail operators come from the ranks of TriMet bus operators who apply for a rail operator position. This affords TriMet a level of assurance that all rail operators are familiar with TriMet operating practices and management procedures.

Recommendation:

- G. Operator Observation Ride forms are made easily available to the Safety Department via the TriMet “share” drive. It is recommended that the Safety Department review these forms regularly and ensure any hazards identified in the forms are entered into the Hazard Management Log and tracked to closure.

General Manager

During the interview with General Manager Neil McFarlane, he stated that as recommended in the Phase I Report the director of safety and security (person who has been delegated the primary responsibility for ensuring that safety requirements of the System Safety Program Plan are implemented throughout the organization) will now report directly to him.

Mr. McFarlane introduced Tom Walsh, former general manager and said that Mr. Walsh would be leading a task force on raising the level of excellence throughout the TriMet organization. K & J feels that this is a commendable undertaking that can afford an open and valuable exchange of information between TriMet and the local community. TriMet should also understand that there can be difficulties in providing the level of information needed to the community members of the task force so that they may better understand the complexities of TriMet operations. K & J was requested to support the task force as needed.

Finding:

14. The realignment of the chief safety officer to report directly to the general manager is an industry benchmark.

Recommendations:

There are no recommendations for this focus area.

Drug and Alcohol Testing

TriMet has an effective drug and alcohol testing program. The program complies with the FTA Regulation 49 CFR Part 655, Prevention of Alcohol Misuse and Prohibited Drug Use in Transit Operations that include: pre-employment, post-accident, reasonable suspicion and random drug and alcohol testing. Post-accident testing for alcohol is conducted within eight hours of the accident; drug testing is performed within 32 hours of the accident.

An employee who tests positive is sent to a substance abuse professional. Regular follow-up testing occurs for up to five years after the first positive test. If an employee tests positive again, the employee is terminated. This record is provided to other transit agencies upon request to preclude the terminated employee from securing employment at another transit agency.

Findings:

15. Reasonable suspicion testing is conducted in accordance with established criteria in 49 CFR Part 655.43. A violation of rules or procedures is not sufficient grounds to have an employee sent for testing.
16. Approximately 50 employees are randomly tested per month. A Safety Department employee picks up those employees in a TriMet vehicle who have been selected for testing and takes the employees to the testing facility. This is an excellent practice and ensures that employees selected for random testing are under observation of an authorized employee at all times during the process.
17. An employee in a safety sensitive position who is involved in an accident and is sent for post-accident testing is permitted to return to a safety sensitive position pending the results of the testing. In the event of a positive test, the employee would then be removed from service.

Recommendation:

- H. It is recommended that TriMet consider restricting an employee from working in a safety sensitive position pending the results of post-accident testing. The FTA regulation, 49 CFR Part 655, is silent on the issue. However, from a liability perspective, it could be a difficult situation for TriMet if an employee were to have another accident while operating a TriMet vehicle, pending test results from the previous post-accident testing, in the event those test results are positive. Some transit agencies assign safety sensitive employees who are pending post-accident test results to non-safety sensitive duties pending receipt of post-accident test results.

Accident Review Boards and Safety Committees

K & J met with Ryan Poehler of the Safety Department and Jeff Ackerson, bus operator and member of the ATU executive committee. There was an extensive discussion about the Accident Review Board (ARB), which the K & J team evaluated and prepared a report under separate cover.

Mr. Ackerson spoke very favorably about the effectiveness of the three-step process of the ARB and the Appeals Board. This process is embraced by the Union and TriMet

because it allows the focus to be on accident prevention. Both parties have agreed to accept the findings of the ARB and the ATU does not file grievances over accidents deemed “preventable.” The Bus ARB is comprised of two members of the Training Department; two bus operators, each with a minimum of five years of safe driving; and the manager of safety who serves as the tie-breaker. The Rail ARB members are constructed in the same fashion, except the two operators are rail operators. In the event the ARB, after careful and thoughtful evaluation and deliberation, determines that the accident was preventable, the operator may voluntarily appeal the determination of preventable accident (PA). The Appeals Board is comprised of two different operators and two different trainers. The chairperson, either the manager of safety or the manager of training, serves as the tie-breaker. The third and final step of the appeal process is review by an independent consultant who is knowledgeable of industry best practices and the accident prevention principles of the National Safety Council (NSC). The independent consultant has two individuals who evaluate the case independently and make independent determinations. The Appeals Board determination is not subject to the grievance process.

The interview also included a discussion of employee Safety Committees. Bus and Rail Safety Committee meetings are held monthly. Ryan Poehler is the Safety Department advisor to the Bus Transportation Safety Committee. Each meeting has an agenda and minutes are maintained. Accidents are reviewed and necessary actions are developed, implemented and tracked to closure. Committee members are motivated and active. They talk to co-workers to assist in identifying hazards to be brought to the committee. Those hazards that cannot be resolved or fully evaluated by the committee are brought to the Safety Department which elevates the hazard or issue to the required level for resolution. Hazards are entered into the Hazard Management Log and tracked to closure.

Findings:

18. Local 757 and TriMet are to be commended on the Accident Review Board and appeal process. This is truly a benchmark for the transit industry in that TriMet utilizes a three-step review and appeals process where as most transit agencies utilize the National Safety Council recommended two-step process. TriMet’s process is cohesive rather than divisive. In the experience of K & J, most transit agency accident rating processes end up in the grievance process, which in some cases can subvert the principles of accident prevention.

Recommendation:

- I. TriMet should continue its innovative, very effective Accident Review Board and Appeals process.

Data and Reporting

Tommye Gilbreath explained the Accident/Incident Database (ACID) which consists of: 1) Reported incidents on the bus and MAX system; 2) a liability tracking system; and 3) employee training history.

Accident review is initiated by the Training Department, which makes the first cut of those reported accidents (events which involve serious injury and/or significant damage), which are then submitted to the Safety Department. The manager of safety then determines which accidents are submitted to the Accident Review Board. Incidents (events which do not involve serious injury and/or significant damage) are not submitted to the Accident Review Board. Ms. Gilbreath reported that there is an average of three bus incidents/accidents per day, which could include anything from a passenger falling on the bus, to a mirror strike or something more serious.

Findings:

19. Ordinarily, one might question the Training Department making the first review and cut of reported accidents; the concern being that the Training Department might not have the same perspective that the Safety Department would in identifying potential safety issues and hazards. However, because of the demonstrated close working relationship between the two departments, the K & J team is not inclined to suggest changes to a process that is working so effectively.

Recommendations:

- J. Periodically review the process to refer accidents to the Accident Review Board to ensure the continued success and effectiveness of the process.

Planning and Scheduling

K & J met with personnel from the Service Planning and Scheduling Department for a brief description of the planning and scheduling processes.

Ms. Kerry Ayres-Palanuk described the planning of the downtown Portland Transit Mall project and explained that the planning of the Mall was a process that took multiple years. Field reviews were performed to assist in planning the bus stops, light rail stops and the traffic control features of the Mall. The Mall provides dedicated lanes for use by light rail, buses, paratransit and TriMet authorized vehicles. Private vehicles and bicycles are restricted to one travel lane. The traffic signals provide preference to light rail vehicles at intersections.

Scheduling and service planning was described by James Hergert, manager of scheduling. He explained trips are established to get from point "A" to point "B", then the

trips are segmented into blocks, from which run-cuts are generated, from which the duty schedules are developed. Quarterly adjustments are made in the schedule based on data we receive from the Bus Dispatch System (BDS).

Findings:

20. Several concerns were received by TriMet bus trainers and operators included in the interview process that schedules were developed with the input of veteran operators and therefore, new and less-experienced operators could have difficulty in meeting the time requirements of the schedule. Concern was also expressed by bus trainers and operators about the amount of construction and the level of bicycle use in the region and the impact on maintaining the schedule. The field inspection by the K & J team provided many examples of these concerns and also afforded the team an appreciation of the daily challenges encountered by the bus operators. It was explained by the manager of scheduling that data from the BDS is also part of the schedule development process, which would include data from all levels of bus operator experience and the data would reflect traffic congestion by time of day.

Recommendation:

- K. The Bus Operations Safety Committee should consider inviting Service Planning and Scheduling Department staff to a future Safety Committee meeting (perhaps with expanded bus operator participation) to discuss the bus route scheduling process. This would assist bus operators in understanding the process and give operators the opportunity to provide valuable information directly to the scheduling staff.

Emergency/Incident Communications and Operator Outreach

The K & J team met with Josh Collins, manager of operations communication. Mr. Collins indicated that his position is intended to be the internal communicator of the Operations Division, although he does have media training. He is notified of all accidents and occasionally responds to the scene of serious accidents. His primary responsibility is to collect the facts from operations personnel at the accident scene and provide feedback to the executive director of operations and other senior management as necessary. Mr. Collins will also translate technical information from operations staff on accident scenes to plain language prior to release of information to the media. TriMet's corporate public information officer (PIO) typically communicates with news media remotely, and relies on operational staff at accident scenes to provide details about the incident and updates from the incident scene. Operational staff or law enforcement officials are often called on to provide statements to news media that arrive at the scene of an incident.

The challenge of communicating with the operator workforce was also discussed. Some operators begin and end their work in the field, and may go for long stretches of time between visits to the garage. Mr. Collins reported that some operators indicate that the only time they see a manager or supervisor is when they are facing corrective action.

Mr. Collins discussed the fact that many employees—particularly operators—have been feeling the effects of heavy scrutiny by the news media over the last year. One of the effects of this is a challenge to employee morale, which only raises the need for effective and encouraging communication from the organization to its employees.

Findings:

21. During the interview, it was indicated that the TriMet PIO does not typically respond to accident scenes, but relies on first responders and potentially, operations personnel to provide the required information to news media at the scene. A brief review of news media coverage surrounding serious incidents suggests that the agency's approach to incident communication relies on first responders at the scene.
22. The Training Department has a strong connection and influence with frontline personnel, and operators report that they rarely see members of Operations management in the field.

Recommendations:

- L. TriMet should consider having the PIO routinely respond to scenes of accidents to manage and respond to the media personnel who are on the scene. Operations personnel have the responsibility to assist rescue personnel as directed, provide information to police and TriMet investigators and follow procedures for normalizing the scene and returning the system to service. Conditions at accident scenes are very stressful. It is a difficult position for operations personnel to be placed in if they are also required to address media questions, and the distraction can compromise the safety of the situation. All media queries that focus solely on TriMet operations should be directed to contact the PIO for response.
- M. TriMet should expand its process for developing proactive, "good news" stories about TriMet personnel and activities to forward to the media. This should include news about safety and security information and community outreach programs. It should be directed both to the media, internal communications and other communication outlets.
- N. TriMet should encourage its managers to spend time in the field and become more available to frontline personnel.

General Observation

The Safety Department currently has seven very effective and professional safety staff members who have the responsibility to perform safety certification, oversee construction safety, identify, assess and mitigate hazards, administer the Drug and Alcohol program, comply with local, state and federal program requirements, conduct Internal Safety Audits (ISAs) and investigate accidents and incidents. The current work demands coupled with the future growth of TriMet is straining the safety department's ability to maintain its proactive operational requirements and could cause the agency to move to a more reactionary safety posture.

Findings:

22. Based on a long-standing recommendation from the Urban Mass Transit Administration (UMTA), the predecessor agency to the Federal Transit Administration (FTA), there should be one safety professional per 175 transit agency employees. It should be noted that most transit agency safety departments do not attain this ratio.

Recommendations:

- O. Based on the UMTA ratio, TriMet should have 12 safety professionals on staff (based on a TriMet total employee count of 2,100 individuals). K & J recommends that TriMet management review the current safety department staffing levels and provide additional staff as appropriate.

SUMMARY

This safety assessment was conducted over a two-and-a-half day period from July 7-9, 2010, at TriMet facilities and at bus stops around the region. The safety assessment included: formally interviewing 17 TriMet personnel (Page 2); review of documents (Page 2) and observations made during field inspections at locations listed on Page 3 on July 7-8, 2010. Only the K & J team and the principals were present during the interviews; no third parties were present. There were interviews during which two or three principals were present.

The K & J team found only one finding (#1), with one subsequent recommendation (A), that could be categorized as a deficiency: the inadequacy of the Bus SOP distribution process. The remaining 21 findings were either commendatory (2, 4, 5, 6, 11, 13, 15, 17, 19) or pertained to opportunities for enhancement of the program or implementing best industry practices.

Overall, the K & J team found that TriMet has many safe and secure operating practices and procedures. In addition, TriMet has made safety and security improvements in recent years that have enhanced its overall safety, security and service quality. K & J

commends TriMet on its decision to have the Safety Department report directly to the General Manager. This is a reflection of TriMet's overall commitment to the safety, security and high service standards for both its bus and rail operations.