



ACTION REQUIRED

Date: December 16, 2015

To: TTC Board

From: TTC Audit and Risk Management Committee

Subject: 2014 TTC APTA Audit

The TTC Audit and Risk Management Committee, at its meeting on September 11, 2015, adopted the recommendations, as amended, in the “2014 TTC APTA Audit” report (attached).

The Board at its meeting on September 28, 2015 deferred the report until such time as information previously requested on the item by the Audit & Risk Management Committee was available.

On November 12, 2015, the TTC Audit and Risk Management Committee received for information, the attached report entitled “2014 TTC APTA Audit – Request for Information” and approved forwarding the two reports to the Board for consideration, with the following recommendation:

It is recommended that the TTC Board:

1. Receive the 2014 TTC APTA Audit – Request for Information;
2. Receive the 2014 TTC APTA Audit and Management Response; and
3. Approve forwarding copies to the Minister of Transportation, the Chief Coroner and the City Clerk.

Vincent Rodo
Chief Financial &
Administration Officer

1-11

Attachment: TTC Audit and Risk Management Reports
- 2014 TTC APTA Audit
- 2014 TTC APTA Audit – Request for Information



STAFF REPORT ACTION REQUIRED

2014 TTC APTA Audit – Request for Information

| | |
|--------------|---------------------------------------|
| Date: | November 12, 2015 |
| To: | TTC Audit & Risk Management Committee |
| From: | Chief Executive Officer |

Summary

At their September 11, 2015 meeting, the Audit and Risk Management Committee adopted a motion seeking additional information on five issues arising from their review of the 2014 APTA Audit. This report responds to the request.

Recommendations

It is recommended that the Audit and Risk Management Committee:

1. Receive additional information related to the 2014 TTC APTA Audit; and.
2. Approve forwarding the report to the TTC Board.

Financial Impact

This report has no financial impact beyond what has been approved in the current year's budget. Some of the TTC responses to the APTA recommendations and suggestions may have financial impacts in future and these will either be accommodated within existing capital and operating budgets or presented for approval in the budget documentation.

Decision History

The content of the September 11, 2015 report had been provided by Senior Management and the *TTC Safety Initiative Report Responses* have been approved by the SX Committee. At the September 11, 2015 meeting the Audit and Risk Management Committee adopted the recommendations as amended by the request for additional information. The Report was tabled for action at the September 28, 2015 meeting of the TTC Board. At that meeting the Board deferred the Report pending submission of the additional information requested by the Audit and Risk Management Committee.

Issue Background

The Audit and Risk Management Committee requested the following five reports from Management:

1. Staff report back on TTC enhancements to the Track Level Safety programs.

The following enhancements to Track Level Safety have been introduced or are in the final stages of being developed or introduced:

Work Area Warning (WAW)

The WAW system provides warnings in the train cab (text message, audible beep, and flashing blue WAW LED) to inform Operators that workers are at track level. Within the right of way, the WAW system consists of radio frequency identification (RFID) tags, flashing blue lights, and posted speed limits at curves with restricted line of sight.

Blue and yellow speed limit signs are posted at curves with restricted line of sight. When flashing blue lights are present, Operators must obey the speed limit signs posted at curves with restricted line of sight until work crews at track level are passed. This system was first trialed on Line 4 Sheppard, then implemented on Line 2 Bloor-Danforth, and is now implemented on Line 1 Yonge-University. Currently this enhancement only benefits workers during revenue service hours. There is a plan to have most workcars retrofitted for WAW and introduced to the system during non-revenue service hours in early 2016.

Hardwired WAW

A pilot project to install hardwired WAW locations is currently ongoing. The pilot installations at end terminals will ensure consistent placement of the RFID tags and associated flashing blue lights in these more complicated interlocking areas. Hardwired locations will be connected directly to the Transit Control Centre via the Supervisory Control and Data Acquisition (“SCADA”) System. Assuming satisfactory testing of these pilot locations, the anticipated installation and roll out system wide is Q4 2018. To date, an initial hardwired WAW location has been installed at Kipling Station. Kennedy Station is currently being installed and will be complete by the end of 2015. Both Kennedy and Kipling are due to be commissioned by year end.

Field Guide

A field guide has been developed to assist employees with track level work zone protection planning. This field guide will also clarify issues associated with placement of WAW RFID tags. The field guide will be introduced following the introduction of the WAW during non-revenue service hours.

The project is ongoing and due in the first quarter next year as part of the introduction of the work planning tool.

Shared Work Zone Governance

A procedure has been developed to govern planned work zones comprised of two or more independent work areas/groups. This procedure introduces the roles of a Work Area Coordinator (WAC) who is in charge of the work zone and Person in Charge (PIC) who is in charge of each independent work area/group. The procedure will be implemented on target December 1, 2015.

Track Access Controller (TAC)

A function has been created for a competent TTC staff member who implements, modifies, and coordinates all track access bookings and track activities at night. The TAC reports to the Transit Controller on shift. The TAC is either based at Transit Control to administer track access or is in the field to conduct audits to ensure compliance with track access bookings and work methods. This helps improve communication between track level work groups and transit control.

The job was posted on October 29th, 2015. The three successful candidates are to start in December with a go live date in January 2016.

Dedicated Safety Watchperson

The role of a dedicated safety watchperson on walking inspections is being introduced in 2016. A dedicated safety watchperson is assigned to carry out the task of listening and watching for approaching vehicles, warning all workers at track level of approaching vehicles, and giving appropriate hand signals to Operators. The dedicated safety watchperson may not perform any other duties while performing this role.

We are completing a further exercise to determine whether the dedicated safety watchperson can be sourced within existing headcount and posts, or whether the current 21 additional headcount is required. Roll out of the dedicated safety watchperson concept (as a competence based task / role) will be in Q1 of 2016.

Competence

The development of a competence based system where access to track level and performance of a particular role or task will be granted based on a person's competence is ongoing. A competent person is qualified because of their skill, knowledge, training, and experience to safely perform a particular role or task. Their competence is demonstrated through the successful completion of formalized training (classroom and/or on-the-job) and the completion of a pre-determined number of logged hours performing the outlined duties.

New roles as well as existing ones are being analysed now by the Training and Development Department on competencies required – skills, knowledge and experience before mapping on existing training to look for deltas. Competency expected to be introduced for certain roles in Q3 of 2016.

Work Planning

The development of a new planning database that will support the track access work planning process for both Revenue Hours and for the Work Window hours is underway. The new database will also display a visual tool that will translate the run sheet into a visual schema showing the planned work zones with clear boundaries. This visual representation will allow for better planning from requestors, improved conflict resolution from planners, and will contribute to Transit Control's awareness of established and cleared work zones. Phase 1 of the project will launch in Q1 of 2016.

2. Staff urge ATU Local 113 to reconsider their decision to not participate in the Track Level Safety Committee.

Management has previously met with ATU Local 113 Executive Board members regarding their members' participation on the Track Level Safety Committee and will continue to urge them to reconsider their decision for their members not to participate on the Committee. Management recognizes that worker participation on the Track Level Safety Committee is an essential aspect of continually improving safety at track level. As soon as the Local 113 election is over, we will engage with the president around representation on committees currently without representation.

3. Staff report back on the Transit Enforcement issues, specifically as they relate to Senior Management clarifying the "security philosophy" they intend to implement and promoting Security Culture.

Senior Management fully embraces a security culture. Senior Management has ensured the Head of Transit Enforcement is an active participant in the Safety/Security Executive meetings relying on KPIs and Subject Matter Experts to lead discussions, identify issues, and provide solutions to security related matters. Senior Management recognizes the importance of a robust system security and has created the Threat Assessment Group which is made up of the CEO, the Chief Safety Officer, and the Head of Transit Enforcement. It is this group which meets in response to a threat, or event, to determine the appropriate course of action based on the intelligence gathered and through consultation with other public safety agencies. All of which is led by the Head of Transit Enforcement.

In an effort to improve the security structure within the TTC, a Staff Sergeant-System Security has recently been hired in the Transit Enforcement Unit and brings years of experience from the private security realm. Management is exploring opportunities to further strengthen the security program by consolidating more of the security functions under TEU which are now decentralized.

Since the security model for the TTC includes both the Transit Enforcement Unit and the Toronto Police Service, and since the Special Constable Agreement between the TTC and the Toronto Police Services Board indicates that the Toronto Police Service has primary

responsibility for responding to and investigating criminal occurrences, it has made sense to create a TTC security system that is based on a Stations Management Model with Customer Service being the foundation for all security related tasks. In other words, instead of taking a “hide and catch” approach, which can be provided by the Police, the Transit Enforcement Unit has taken a “be seen and prevent” approach. This mixed model of security services (Police and Transit Enforcement Unit) provides two approaches both with the same desired outcome; to disrupt one or all of the sides of the Crime Triangle (Motivation, Opportunity, Ability) in an effort to reduce or eliminate criminal acts and provide an overall safe environment for our customers. Since the Transit Enforcement Unit has taken on the role of “be seen and prevent,” it is easy to start with a customer service approach, through the Stations Management Model, to determine staffing, deployment, to enhance or, when appropriate, replace the Police presence and take appropriate action. In this respect the TTC is organized differently than some other transit agencies, especially where the transit agency serves multiple municipalities, where the security department is a fully authorized police force (Vancouver).

4. Staff report back on the development of a protocol between Toronto Police Service, Fire and TTC for accidents/incidents where there are no fatalities in order to achieve balance between transit services and forensic investigations.

Progress has been made and an agreement in principle has been reached between the Toronto Police Service Traffic Services Unit and the TTC Transit Enforcement Unit regarding the clearing of accidents. A meeting will be held in the month of November to formalize the process which will most likely include a reporting protocol to advise the Toronto Police Service that Transit Enforcement has arrived on the scene of an accident which is negatively affecting TTC service, a checklist to determine if Transit Enforcement should consider moving the vehicles from the service line, a requirement to provide the motorist with TPS authorized pamphlets advising the motorist on the proper protocol for reporting the accident at an Accident Reporting Centre, if appropriate, or to wait at an alternative location for the arrival of the Toronto Police Service.

5. Staff report back on the issues surrounding the lack of provincial regulations with a view to going forward to the Provincial Government to request the co-operative development of provincial safety standards for municipal transit agencies.

TTC received a communication from an official with the Ministry of Transportation on October 15, 2015 to indicate that they are planning a study to help staff to develop a comprehensive understanding of urban rail transit safety approaches currently in place in Ontario and other jurisdictions, in order to inform consideration of whether there is a need for an Ontario Urban Rail Transit Safety Framework. TTC staff has accepted the Ministry’s invitation to continue to participate in a Stakeholder Advisory Committee to assist in the effort.

Accessibility/Equity Matters

There are no accessibility or equity issues related to this report.

Contact

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Attachments

- 1) Agenda and Minutes of the Audit and Risk Management Committee Meeting of September 11, 2015.
http://www.ttc.ca/About_the_TTC/Commission_reports_and_information/Committee_meetings/Audit_Risk_Management/2015/September_11/index.jsp
- 2) Agenda and Minutes of the TTC Board Meeting of September 28, 2015.
http://www.ttc.ca/About_the_TTC/Commission_reports_and_information/Commission_meetings/2015/September_28/index.jsp



STAFF REPORT REQUIRES ACTION

2014 TTC APTA Audit

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|--------------|--------------------|
| Date: | September 28, 2015 |
| To: | TTC Board |
| From: | Andy Byford, CEO |

Summary

The 2014 TTC APTA Safety Initiatives Report provides a documented review of observations identified for potential action by TTC. The 2014 Audit served as a pilot project for APTA's draft standard *Urban Rail Safety Program*. Together with the elements of the audit standard, the TTC requested special attention be paid to:

1. The approach TTC has taken to develop an Enterprise Risk Management program and Safety Risk Register.
2. The approach TTC has taken to develop a corporate level Safety Health and Environment Management System
3. Decentralization of the safety function
4. Employee engagement
5. Track level safety
6. Security

The new audit protocol as well as the focus items provided for an environment rich in opportunities for constructive feedback and continual improvement. It is these Safety Improvement Initiatives that are provided

Recommendations

It is recommended that the Board:

1. Receive the 2014 TTC APTA audit and Management Response; and
2. Approve forwarding a copy to the Minister of Transportation, the Chief Coroner and the City Clerk.

Financial Impact

This report has no financial impact beyond what has been approved in the current year's budget and the 2016 operating budget submission.

Decision History

The content of this report has been provided by Senior Management and the *TTC Safety Initiative Report Responses* have been approved by the SX Committee. This report was approved by the Audit and Risk Management Committee on September 11, 2015 subject to the following motions:

1. Staff report back on TTC enhancements to the Track Level Safety programs;
2. Staff urge ATU Local 113 to reconsider their decision to not participate in the Track Level Safety Committee;
3. Staff report back on the Transit Enforcement issues, specifically as they relate to Senior Management clarifying the “security philosophy” they intend to implement and promoting a Security Culture;
4. Staff report back on the development of a protocol between Toronto Police Service, Fire and TTC for traffic accidents/incidents where there are no fatalities in order to achieve balance between transit services and forensic investigations; and
5. Staff report back to the ARM committee on issues surrounding the lack of provincial regulations with a view to going forward to the Provincial Government to request the co-operative development of provincial safety standards for municipal transit agencies.

Issue Background

The Coroner’s Jury into the Russell Hill Train Accident recommended a review of the Ontario Railway Act to create a regulatory framework, an oversight agency and regular independent safety audits of TTC rail operations. In order to address the recommendation, TTC proposed that the rail safety audits performed by the American Public Transportation Association (APTA) be made public and that the ensuing management action plan be tabled at an open meeting of the Board of Commissioners. Upon Board receipt copies were sent to the Minister of Transportation, the Chief Coroner and City Council. This introduced a measure of transparency in rail safety. To ensure accountability for improvement, each corrective action was tracked to closure and reported periodically to an open meeting of the Board.

In response to regulatory developments in the United States, APTA has developed new guidelines for transit based on a concept known as safety management system (SMS). Transport Canada has already introduced SMS for the rail, marine and aviation industries but does not have jurisdiction over municipal transit agencies.

TTC has embraced the concept of SMS as the emerging standard for safety and has a formal process to transition from the pre-existing System Safety Program. This process involves the development of new SMS program elements for approval at the monthly Safety Executive Committee chaired by the CEO. These elements are implemented throughout the Commission following a formal implementation plan. Our target is to have a fully functioning SMS by the end

of 2017. Specific risk control programs will be continuously developed and improved within this framework.

TTC is the first transit agency in the APTA safety audit program to adopt SMS. We volunteered to serve as the pilot project to develop and test a new audit protocol based on APTA's new guideline for safety. As such, this audit is qualitatively different from all previous APTA audits. The scope is the entire corporate SMS as opposed to a narrow focus on rail operations in the past. The audit team was expanded to include peers from transit operators in Canada, the UK and Hong Kong who already have adopted SMS. The audit also introduced a measure of the maturity of each element in the management system, considering that we are in transition from one model to another.

As this was a learning experience both for TTC staff and the APTA audit team, the report and the management response are both lengthy documents. APTA distinguishes between recommendations and suggestions, however, both are treated equally in the management response. We propose to track each to closure and report periodically to the Audit and Risk Management Committee and to the Board.

Accessibility/Equity Matters

There are no accessibility or equity issues related to this report.

Contact

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Attachments

1) TTC Safety Initiative Report Part 1

http://ceo.int.ttc.ca/dc/safetyande/safetyengi/governance/_layouts/DocIdRedir.aspx?ID=05104-121-9

2) TTC Safety Initiative Report Part 2

http://ceo.int.ttc.ca/dc/safetyande/safetyengi/governance/_layouts/DocIdRedir.aspx?ID=05104-121-10

3) TTC Safety Initiative Report Responses

http://ceo.int.ttc.ca/dc/safetyande/safetyengi/governance/_layouts/DocIdRedir.aspx?ID=05104-121-11

SAFETY MANAGEMENT SYSTEM REVIEW

PRELIMINARY REPORT

FOR

TORONTO TRANSIT COMMISSION



Review Date: November 17 – 21, 2014

Conducted as a service of the

Safety Management Review Program

AMERICAN PUBLIC TRANSPORTATION ASSOCIATION

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William P. Grizard, Director – Safety Programs



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INTRODUCTION

Review Background

The **Rail Safety Audit Program (RSAP)** is part of the **American Public Transportation Association (APTA)** Safety Management Program and is designed to provide participating rail transit systems with a process for development and implementation of a Safety Management System (SMS) that is specific to an individual system's needs. The Program also provides for a periodic review of the maturity level to which a transit system has implemented its SMS.

The RSAP began development in 1986 by the APTA Rail Safety Committee (RSC) to ensure the highest standards for safety are maintained. The original program has been updated over the years to ensure it represents the continuous improvement process and reflects current industry practices to achieve a goal of safety program excellence. Under the RSC's direction, a recommendation was made to develop a formal review format to complement APTA's *Safety Management System Guidelines for Public Passenger Transportation Systems and the APTA Urban Rail Manual for the Development of Rail Transit System Safety Program Plans*. In December 2013, the RSC inaugurated the plan for a pilot program to provide field testing of the reconstituted Urban Rail Manual and the Safety Management Systems Guideline. The **Toronto Transit Commission** volunteered to be the first agency to undergo a trial review using the newly created format. This report represents the results from that pilot study.

What This Review Represents

The **Toronto Transit Commission (TTC)** safety review was conducted November 17 - 21, 2014 by the North American Transit Services Association (NATSA) review team of William Grizard, William Thorpe, James Brown, Clyde Earl, David Hahn, and Michael Smith. Subject Matter Experts used as Peer Auditors included Doug Semple, Melanie Morris, Dennis Bonney, Alex Lau, and Ian Gaskin were invited to participate in the review as specialists. The review was conducted in accordance with provisions of the APTA *Manual for the Development of Rail Transit System Safety Program Plans*, the *Safety Management Systems Guideline for Passenger Transportation Systems (draft)*, and the *Urban Rail Guidelines for Development of Safety Management Systems (draft)*. Mr. Andrew McKinnon coordinated meetings and interviews held with staff from all major departments within TTC.

This preliminary report represents the findings of the pilot review relative to the TTC Safety Management

System (SMS). All APTA recommendations, unless related to established industry codes, standards or regulations, are non-binding and may be accepted or rejected after management review by the transit system. Supplemental forms included with this report provide detailed comments on findings by the review team for which improvement actions are expected to enhance the Safety Management System.

How to Interpret the Review

The numerical notations on the Checklist determine the status of the observation by the review team and are defined as follows:

Element Status (column identified with "S")

- 1: **Conforms to Plan Requirements** - Complies with program standards set by the industry and requires no additional action by the transit system.
- 2: **Action Needed** - Does not meet program plan requirements and/or standards set by the industry and requires attention by the transit system. May also provide suggestions for program enhancements. Actions adopted are carried over and detailed in an improvement action plan.
- 3: **Not reviewed or Not Applicable** - Identifies reason why area could not be reviewed.

Maturity Level (column identified with "M")

- A. Planning / Initiating / Under Development:** efforts based on response to past incidents. Safety may not be fully appreciated or understood.
- B. Initial Implementation / Developmental:** In place and documented; a coordinated effort has been made to conform to the element; not yet mature
- C. Full Implementation:** Goals & performance measures established & disseminated with roles and responsibilities; Process meets or exceeds conformance, properly resourced and supported by management.
- D. Sustained Data Driven Managing & Measuring:** Continuous improvement cycle in place & risk reduction focus; healthy management system process receives full support and participation from all employees.

The RSAP focuses on a transit system's Safety Management System and implementation of its Safety Program Plan. It offers the benefit of having an outside, independent evaluation of how its own management processes are tracking all the items necessary to maximize safety in the areas of operations, maintenance, training, inspections, and employee testing. The report evaluates the extent to which the management processes are in balance with its own plan and industry norms. The review report does not, nor is it intended to represent an in-depth review or review of the safety of the transit system itself or of its operations and should not be relied on as such. While the Safety Review does not evaluate the actual physical conditions of the transit systems, the safety management practices are evaluated. This process helps each transportation system determine if its own Safety Management Program meets accepted, contemporary standards.

OVERVIEW OF REVIEW PROCESS

This Safety Management System Review encompassed all elements of the TTC Corporate and Department Safety Plans and the means for their implementation. This assessment focused on reviewing processes, documents and records, and interviewing managers in each department to verify that all elements of the Safety Program were developed, implemented, and reviewed on an ongoing basis. In accordance with the requests made by TTC executive leadership, several specific focus areas were added to the scope of the review, including: Enterprise Risk Management, Corporate Safety Health and Environmental Management System, Decentralization of the Safety function, Employee engagement, Track Level Safety and Security.

This being the first pilot effort of merging the Safety Management Systems concept with an audit based on use of a Maturity Model, the report layout in general and the itemized specific comments are arranged quite differently than as used in previous audit reports. The first major change is the way the content of the supplemental report is organized. The new format of the report follows the System Safety checklist in order of elements arranged in each Safety Management Pillar, starting with Pillar I and continuing through to Pillar IV. The second major change relates to the focus of the review at the safety processes in the executive (corporate) management levels and combines all modes of transportation within each element. In the past we started with the individual departments, rolling up to the executive level. It is also the first time that we have included the bus operation within the scope of the review. As a result of these major changes, it is important to note that the supplemental forms report back to the checklist topic and contain information that may apply to just one department or too many departments that happen to share responsibility for a certain element.

In previous audit reports provided to the TTC we have followed a protocol where significant findings were published in the Final Report and opportunities for improvement were provided in a supplemental document known as a Management Letter. They both contained recommendations for improvement of the safety process with the difference being that recommendations made in the Final Report were for issues that needed action to rectify a discrepancy whereas, in the Management Letter, recommendations were intended to be subject to the discretion of the agency - as time, cost or efficiency allowed. In this new report approach there is no Management Letter. Recommendations and Program Enhancements are combined together under the section header of "Action Needed". However, we have provided new terminology to provide separation between those recommendations that are in need of improvement, indicated by the term "APTA recommends" versus those recommendations that are intended to be optional (formerly program enhancements) in making a good process better by using the nomenclature "APTA suggests". In reading the findings for each of the checklist elements, the first set of findings listed under the title "Effective Practices" are those areas that the assessment team members found to be noteworthy, commendable or even identified as **Industry Leading Effective Practices** which is intended to designate programs or procedures that exceed the industry norm. The second set of findings are those listed under "Action Needed" which can have both recommendations and suggested actions associated with them. These findings will be reviewed and responded to by the TTC in an improvement plan outline which is designed and formatted to mirror the checklist element sequence.

Transit systems participating in any of the APTA Safety Management Programs are expected to ensure that all the items contained in the "Checklist" portion of this document have been incorporated into their respective Safety Program Plans. However, as it is fully realized that each system is somewhat unique and that respective System Safety Program Plans must allow for the characteristics of each system. For this reason APTA program materials do not prescribe an absolute format for Safety Management Systems or corresponding System Safety Program Plans. Rather, it offers a suggested format along with the type of methodology that will accomplish the purposes of a safety management system. The final choice of methodology to ensure that these checklist items are accomplished will rest with each respective transit system. The methodology must, however, be demonstrable from a safety compliance assessment perspective and properly documented by the system.

It should be emphasized that the TTC Safety Management System, the Corporate 5 Year Plan and corresponding policies, program plans and guidance materials, establishes the safety philosophy of the entire organization and provides the means for its implementation. A Safety Management System documents the strategy to:

- Establish a safety policies, plans, programs and procedures on a system-wide basis to control all of its operational risks;
- Engage employees, customers, and stakeholders in a positive and robust safety culture;
- Provide a medium through which a property can display its value of and commitment towards safety;
- Develop a framework for the implementation of safety policies and the achievement of related goals and objectives;
- Satisfy regulatory requirements and meet accepted industry codes, standards and guidelines; and,
- Continuously improve safety performance using safety assessments and analysis of data to support risk-based actions

In order for a review of a Safety Management System to be effective, the ensuing results must be used for positive, all-encompassing actions to continuously improve. This does not occur if the review report is not an official document or, that is not automatically disseminated to all appropriate levels of management for review, comment and proposed actions. A management plan and process needs to be in place to review, consult and be empowered to establish any action items arising from the analysis of this report. Various techniques such as review coordination meetings and management briefings can be used to make the process as unobtrusive as possible while still sharing valuable input with each respective department as to areas of concern and possible actions to improve. No matter which method is chosen, it is important to design the process so it is construed as a positive force in the organization.

REVIEW SUMMARY

The TTC Safety Management System Review was conducted by the North American Transportation Services Association (NATSA) for the purpose of assessing the level of Toronto Transit Commission (TTC) safety program implementation as a control against operational risk and adequacy of the TTC Safety Management System (SMS) in meeting corporate goals and objectives. This review was conducted in accordance with TTC Safety Health & Environment Management System Manual, the American Public Transportation Association (APTA) Manual for the Development of Rail Transit System Safety Program Plans which formed the principle audit plan criteria used in this assessment. Because this review was also intended to be the pilot effort for the APTA Rail Safety Committee's new audit scheme based upon the Safety Maturity Model a new checklist was created following the criteria found in the APTA draft Urban Rail Manual which is based on the APTA Safety Management Program guidelines. Additional input on safety management systems came from a cadre of international peer review professionals with specific subject matter expertise in organizational structure and safety management systems.

The Review included an assessment of the adequacy and effectiveness of the TTC Safety Management System targeted at the higher levels of safety management within the organization. This effort included both the review of the implementation of the corporate 5 year plan and its effect upon the corporate safety strategy within the expanded organization and the relationship of the newly shaped TTC Safety Management System to accepted transit industry practices. To accomplish this large task, a total 72 interview meetings and 3 site visits were conducted onsite with TTC staff over a 6-day period. A total of 11 members formed the review team which was made up of 6 NATSA auditors and 5 peer review auditors drawn from regional, national and international transit companies who were chosen based upon their subject matter expertise related to the 6 special focus areas of the review. The APTA Program safety elements utilized in this review covered the 4 foundational areas of safety management systems: safety policy and procedures, safety risk management, safety assurance, and safety promotion. These 4 foundational areas are composed of 22 safety program elements in the APTA program. Although the assessment process incorporated all 22 APTA safety elements, one additional element was added that represented the Security programs of the TTC. In addition, the TTC review incorporated 6 special focus areas prescribed by executive management for review as follows:

- Corporate Safety Health and Environmental Management System
- Enterprise Risk Management
- Decentralization of the Safety function
- Employee engagement
- Track Level Safety
- Security.

By using a peer review approach and engaging industry subject matter experts to supplement the Review Team staffing, a more concentrated review of these focus areas was conducted by those experienced in these specific program areas. Provisions were made for the peer auditors to report out on these 6 focus areas to the management staff during their onsite visit. Following is a short summary of the findings from this effort:

Corporate Safety Health and Environmental Management System

The 5 year Corporate Plan, the creation of the SX committee chaired by the CEO, the new H&S Policy and the development of the HSE manual and corporate standards shows a clear commitment to put safety at the heart of the business. All interviewed recognised the value of a corporate approach however, there is a low understanding that a Safety Management System means a consistent way of managing and working across the business. There also appears to be pockets of misunderstanding of the differences between the SMS approach and the System Safety approach since they both share common elements but are applied from an integrated management process approach rather than as separate programs at the individual department level. Most departments have been accustomed to carry out safety initiatives and development activity, so there has been no need to form the shared dependences that the SMS must have to be effective. Add to this the way that SMS is being implemented, the Management System will not incorporate local ways of working as defined currently in local management systems, so full "integration" is not achieved. It would be helpful to establish a clearer articulation in linking department initiatives to the SMS and the SMS to corporate 5 year plan. This would allow great local programs to be tied into SMS systems and then shared with the organization.

Change management is seen as one of the larger issues to gain control over by the review team. Change management of the corporate system, including changes to the HS&E (commonly referred to as “Corporate Safety”) is treated as separate from the departmental systems. Change management is largely undefined at departmental level and has become “self-governing”. When change to the management system does occur affecting the department level, it is not processed within a defined framework. Changes management should require program implementation plans be completed including timescales and agreed upon in collaboration with the directorates and then more widely communicated to those who need to implement it. A Management system standard should be developed stating requirements for Management Systems development and maintenance to ensure sustainability. Establish SMART targets and milestones, with KPI’s which are cascaded to departmental level. By setting standards for departmental management system development there should be a consistency in direction for HS&E and all other management systems development.

The review team grappled with the questions of whether the changes to the corporate plan and the HS&E plans were coming too fast for the departments to digest and too prescriptive for departments to implement. The review team saw many instances of sound safety programs in place at the business level that are adequate and fully implemented. Some of these superseded by changes made to the HS&E. When reissuing the safety programs, some were done by rote while, in other cases, affected departments were involved with creating the new or reissued program standard. The review team favors the collaborative approach in most cases, with the risk being that it can consume more time in development the more stakeholders are involved, however, the implementation phase may be shorter due to the agreement and buy-in by the stakeholders. However, the consensus process is not suited for the need to change safety critical processes on a timely basis and there is also the need to establish an authority to safety critical processes to not only “own” the document but also be in a position to initiate change when needed. Best practice seems to favor a stakeholder / group consensus process for the development of new programs or procedures and the implementation of programs and procedures to be at a single point of authorization where prescriptive action must be taken. The capacity to act on changes being brought forward were found to vary within TTC as some departments that had been uprooted during the reorganization were struggling to attend to different or added responsibilities while others (generally not radically changed in the reorganization) were better prepared to absorb change. The degree of change is also a factor as some of the departments had more detailed programs in place than what the changes addressed or they had not previously implemented a program of this type and had to “double the hill” to make it happen. As with any program, some resiliency must be built into it to provide latitude in how departments deploy it effectively within their areas of responsibility.

In spite of all the changes taken place at the top levels of the organization there seems to have been little change in the conventional ways in which communication within the organization is processed. Consider beefing up support to the Safety Executive Committee with sub-committees looking at specific aspects (already has a risk committee, but can add more such as Operation Rules and Standards, OSH etc.). Opening up additional channels of communications provides for better engagement with safety programs of the business and achieving corporate goals.

There seems to be an issue with the internal marketing and branding of the Safety Management System concept within the revised HS&E plan overall and as it pertains to the term of “integrated”, the point of it all may have been misunderstood. The HS&E plan has been tagged as “the Corporate Safety” plan and is viewed as separate from or “in addition to”, the safety functions operating at the business level. This creates a push – pull effect which interferes with program implementation. In addition, the concept of integrated management systems is not well understood within the business, tending to be applied to integration of corporate and local procedures or staff resources rather than being looked at as integration of management process. This may related to the disconnect between the embedded safety consultants and the safety assurance unit as the safety effort was expanded to provide expertise at the working level was, in effect, a means of integration but has yet melded to the point where significant gains have been realized.

There was also a noticeable lack of visibility on the promotion of positive safety culture. The promotion we did find of leading indicators, were just exception reporting on accidents, delays and unwanted events. Consider other metrics such as the number of hazards removed from the system this month, near misses reported, customer commendations on safety as a way to redirect the safety direction, management view and purpose for employee engagement.

Enterprise Risk Management

The holistic approach to Enterprise Risk Management (ERM) that the TTC is developing is degrees of magnitude above what has been accepted as the typical approach to transit risk management over the last several decades. APTA has encountered this approach at some of the larger transit organizations and seen the benefits of pursuing this methodology and is very much encouraged that TTC is moving in what we see as the right direction on managing commission risk which will include some safety risk at the higher levels. We were fortunate to have peer review members on our team with ERM experience from their own agencies. Overall, the consensus of the team was very positive on the method and direction that the TTC ERM program was going, however, there was a concern that the impending major capital programs (over 100 projects / \$26 Billion) would significantly impact the value of bringing on the ERM at its current timeframe for full implementation at 2018. These major investments could have risks associated with them that would not be assessed in time to be identified and mitigated, therefore the review team believed there should be a sense of urgency applied to the rollout of the ERM and a strategy in place that targeted capital projects as well as the operating system. From the review findings of the ECE department, we believe that they have a high level of systems management already in operation and therefore the capability to easily integrate the ERM process as it parallels the program they have in place to address safety hazards to reduce them to acceptable ALARP levels for handover to the operating departments prior to revenue service.

We found that the program as being implemented will bring value to the business and enable prioritisation of resources against known risks. It is the right direction and the right approach for TTC but we see a need to move more quickly in the implementation aspect. Consultation approach takes time and this needs to be balanced with growth of the agency that is already well underway. There are also resource considerations on managing the ERM project and the database information since there is currently only 1 employee in the new department who is setting up the structure, acquisitioning and deploying the database, and developing the training program content. That being said, from interviews it is clear the approach is being effectively adopted in the business and implementation has started in the newly formed stations management group which includes training. We believe that the implementation is being done against clear timelines but at the business level, not per corporate objectives since we did not see evidence that targets had been established based on corporate direction.

The corporate level concepts of “all risks” has been defined and a risk appetite model has been developed based on fatality equivalents (FWI). The aim is to be able to prioritize investment decisions including those related to safety. Work is now underway to mobilise the assessment tool which is a customizable ERM database management package. The ERM database is based on Bow Tie Analysis which includes the ability to set the level of risk acceptability. When used in business cases, it conforms to the ALARP concepts. The current method employed by TTC uses a hazard level approach which creates a semi - quantified assessment of safety hazards and risks (HIRA). While this process is valuable in developing workplace control measures it cannot perform satisfactorily at the ERM level. A Safety Risk register based on statistical risk of key hazards resulting in injury will be developed to interface with the ERM.

At corporate level we found that there is low visibility of rank order of safety risks and other corporate risks which this ERM process should effectively address. In the business areas visited some managers were aware of the program and only a few were conversant with the concepts, such as “risk owner”, but in all cases the timing for implementation was unclear. Lack of information sharing creates a risk to the success of the project. The ERM process is very dependent on the business areas understanding that they are the risk owners, so we see the urgent need for clarity of risk management process, how the program is designed to carry that process and what activities are going on now to roll this out. Clearer communication to the business on timescales and implications would aid implementation and acceptance. Business level management needs to know that the enterprise risk register will be based on statistical risk of key hazards resulting in injury (FWI) and what that difference means to the HIRA process they have been trained to. They also need to understand the implications for the existing hazard Identification and risk analysis outcomes as they were not clear on how HIRA would link to the “new risk Register”

Decentralization of the Safety function

TTC has acted upon the concept of integration of safety process by creating the provision of an embedded safety consultant within the line departments. This enhances to a great extent, the importance about the line organization being most responsible for safety. The creation of a cadre of Safety Consultants directly reporting into the areas they support is complete and seen very positively for the following reasons: Previously there was a perception (right of wrong) that the Safety Department was passing over problems for the line departments to have to resolve on their own. There was also an additional believe that the safety department was acting more in the role of “policeman” than a resource to the departments. It was noted by the review team that the role of the safety coordinators has been central in implementing the SMS and the HS&E plan. This has great benefit in that through proximity and focus in one area the safety consultants are becoming increasingly knowledgeable and understand the business context better, so can provide more effective daily support. There is more certainty of support as they are directly managed. This arrangement is considered better than the previous Service Level Agreement approach. They are more actively involved in safety validation and critique than before.

The new arrangement does come with some business risks that did not exist prior to the changes made and still require some thoughtful constructs to ensure the program stays focused and true to the mission. There is a risk that departmental issues and any solutions that might have applicability elsewhere would stay buried at the local level. There is a risk to maintaining essential communication loops on status of safety efforts between the department level and up and down to the corporate level. The Safety Consultants could become just an extra resource and start to undertake tasks that should lie with delivery managers and loose the safety focus, thus replacing line management’s role in managing operational safety. Close working relationships might mean that objectivity and the ability to good faith challenge is lost or muted. Within the safety consultant circle there was also the concern of serving “two masters” - the line management as well as the safety department and that each of these management function would feel or demand attend to their needs first. These challenges are recognized across the business. The review team sees all of these challenges and concerns as being manageable with checks and balances put in place to monitor and sound alerts whenever controls measures become strained. However, we also see the potential for harnessing the energy and redirecting it towards the development and improvement of the continuous improvement model integral to the safety management system. To ensure sharing corporate issues resolution, the weekly cross departmental meeting of the Safety Coordinators should continue, with functional issues as a focus. The establishment of a position on the corporate Safety Assurance Team of a Consultant Co-coordinator will help ensure that cross – departmental learning is not lost and that program value developed within the business level is captured and used to enrich the safety management system. The role of the safety consultant to engage the corporate program and act as bridge to the delivery at the business level solutions up to become visible to other departments is key to process improvement. To help embed the approach it is suggested that joint personal objectives are set for the safety consultants between line management and the corporate safety team. The executive leadership should formalize the SMS objectives as part of the Safety Consultants role and focus on developing checks and balances within the management system to prevent abuse of the process and resources. The executive team should also be active in promoting local successes as enhancements to the TTC HS&E plan (avoid “Corporate Safety plan”) and support methods to increase visibility of results on key priorities to track as KPIs

Employee engagement

Historically there has been a low level of engagement between TTC employees and senior management, however the investment in Work Same Home Safe shifted that approach and TTC management now recognizes the importance of engaging employees at all levels. The review team found a robust Joint Health and Safety Committee (JH&SC) well established and very productive. Engagement at managerial level with the approach is strong – and being cascaded. Town hall meetings and round table sessions are being held between executive staff and employees and with department management and staff. The review team noted the number of opportunities to increase dialogue with employees such as the special Summer BBQ event and received comments directly from management and employees “first time this has happened” and “I have set targets for engagement activity for my lead team”. Staff still speak highly of the Work Safe Home Safe effort and pockets of the organization are still using the practices. The review team believes that in the area of employee engagement that TTC is clearly on the right path. Some good opportunities exist to enhance the programs are just now being implemented, such as the Narrow casting CCTV effort, re-establishing “The Coupler” newsletter, maintaining Behavioural Safety Technology approach, quarterly News Letter From Bus Maintenance JH&SC, and extending scope of CEO Award scheme based on the 7 primary objectives.

Track Level Safety

After a series of fatal occurrences, the TTC established two working groups to develop improvements to the track access procedures and practices. One working group is focused on the Operating Rules book revision while the other is focused on Track Safety practices. The Track Safety Committee is a joint management employee committee to design and then implement improved track procedures. The committee has developed three current recommendations which are at review stage with the business. Extensive benchmarking undertaken with other Transit Authorities to ensure that the procedures undertaken are in alignment with the industry at large. The committee has already implemented the Warning at Work Blue light procedure to enhance protection for track workers in Traffic Hours. The review panel appreciates the work of the committee and believes the approach should continue, but found that it was too constrained within a consensus framework to be able to act decisively when conditions dictate the need for prompt action to be taken.

The current rule book and associated training poorly equips staff to establish safe working areas. The review team suggests consideration should be given to expanding the Rule Book committee role to not only overseeing the future development of the Subway Rule Book, but to also take similar responsibility for the Streetcar Rule Book. Training practices provide for 2 days of initial training and 1 day annually of refresher training, but this not extended for those with management or administrative responsibilities. Instead, a computer based training module is provided and usually takes 1 to 2 hours to complete. It is also practice to only train to the current rule book so any changes that have occurred over the years between publications of the new rule book are handled by the individual departments as On The Job training.

The review team found that the process for achieving track level safety was slow, cumbersome and had gaps in the development of practices and procedures and training practices which together were not meeting acceptable industry standards. The TTC should consider enhancing the track level safety programs with a sense of urgency.

Security

The TTC's Transit Enforcement Unit (TEU), formerly referred to as *TTC Special Constable Services* is performing at an admirable level considering their significant reduction in resources and expanding mission. The TEU is focusing on security critical activities, fare enforcement and assisting the Toronto Police Department with protecting the employees and customers in, and around TTC. Opportunities exist to enhance the security program and further serve and protect the customers, employees of TTC. APTA recommends that the management team prioritize the development of a System Security Plan (SSP). TTC should clarify the "security philosophy" they intend to implement, and appropriately dedicate resources to support the evolving security program. This will assist the TEU with re-focusing their efforts, clarifying their mission which is rapidly changing. TTC will need to determine the appropriate level of resources to support the evolving security philosophy as additional modes are converted to the Presto proof of payment fare collection system. The SSP should be reviewed annually and appropriately updated to reflect the changes within the organization to adequately address the vulnerabilities of the expanding system.

TTC should support information sharing with external stakeholders, including police and emergency services. TTC would benefit from strengthened partnerships, participation in table top, full scale exercises and emergency drills. Additionally, APTA highly recommends TTC engaging relevant stakeholders with special event planning for events such as the Pan Am and Parapan Am Games, hosted in Toronto in 2015. TTC should consider addressing the fragmented security responsibilities conducted by multiple departments including Human Resources, Safety department. TTC should also address the shortage of security critical subject matter experts, such as CPTED, Access Control personnel to assist with security design reviews, system security vulnerabilities and mitigating related security risks. Finally, TTC should utilize APTA Security Standards and further engage industry security committees to increase information sharing, use additional best practices and strive for continuous improvement.

The objective of the security audit focused on evaluating TEU methods, the overall security program, and providing relevant industry leading security best practices. The Security review focuses on TTC system's System Security Plan and the system's implementation of such plan and evaluates the extent to which a system's management processes are complying with the plan. TEU currently does not have a SSP they are utilizing since the reorganization of 2011. The audit checklist is specifically designed to assess the SSP. The supplemental forms correspond with the checklist and provide the relevant details pertaining to the audit finding. The audit report does not, nor is it intended to represent an in-depth review or audit of the security of the rail system itself or of its

operations, and should not be relied on as such. This report represents the findings and areas for improvement relative to TTC TEU.

Concluding Remarks

The TTC is in the process of significant change associated with its safety management processes. The transition from the traditional System Safety Program Plan (SSPP) to the Safety Management System (SMS) protocols has created challenges with staff in clearly understanding what it ultimately means to their respective areas of responsibilities. Capital program investments in new technologies (e.g., new vehicles and ATC) will further challenge the organization with the desired application of its safety management program. Whether it is the SSPP, SMS or some future safety management approach, the success of the safety program is predicated on establishing a clear strategy for implementation that includes defined tasks, assigned accountability, schedule, training and awareness with ongoing communications and progress reviews established with all affected stakeholders. The review team also recognized that this review was performed in the midst of major organizational restructuring with departments realigned to a new governance model and the upheaval this creates with transitioning to new protocols, procedures and practices. Understanding the value of the change and departmental stakeholders' acceptance of their respective roles and responsibilities is critical to the success of SMS. The effort of TTC to achieve a strong degree of safety program implementation in all areas of system operations is due to the effectiveness of its management, and a strong commitment to continually improve upon its safety management practices. During the intensive 14 days of review activities, the team was involved in interviews and observations comprising all areas of the TTC Safety Management System.

The effort of TTC to achieve a strong degree of safety management program implementation in all areas of system operations is impressive and success to date is due to the effectiveness of its management, and a strong commitment to continually improve upon its safety management practices. Allowing for some areas where recent organizational structure changes were affecting full implementation of programs, the review team found all essential elements of the TTC Safety Management System to be under development or implemented. During the intensive 6 days of onsite review activities, the team was involved in interviews and observations comprising all areas of the TTC Safety Management System.


Throughout all of the pressing issues of numerous capital projects and rail expansion activities, the TTC continues to be highly focused on its safety first culture while giving adequate attention to high performance goals and customer commitment. Undesired events and service disruptions are handled expediently and professionally with quality solutions, not just stop gap measures. Attesting to this focus on safety the APTA review team identified 6 Industry Leading Effective Practices in place. This represents, in a very tangible way, that the safety effort remains strong and effective in many areas with many activities in place for garnering even more improvement. TTC is encouraged to continue their commitment to continuous improvement in safety and the implementation of integrated management systems to permeate all other functions in the organization.

The review team expresses sincere gratitude for the assistance and cooperation afforded by the entire TTC staff and the patience and understanding provided in the development of this pilot effort.

Toronto Transit Commission
Safety Initiative Report
Part 2

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Note: *This General Recommendations section of the report is intended to provide a broader perspective of safety issues and provide a point for discussion on high level findings as may apply to several departments or related functional areas of **Toronto Transit Commission**. Please refer to the Supplemental Forms following the General Recommendations for detailed comments that are applicable to specific checklist elements within the Safety Management System Guidelines published by APTA.*

1. Safety consultants were found to be well received by all departments interviewed. These employees were assigned at nearly every department visited and were working diligently on safety issues, identifying the solutions and then implementing them. Resolution of these safety issues created a need to log, track and keep current on the status on the many issues being dealt with on a database, as well as any additional corporate safety programs that needed implementation at the department level. If one database was not appropriate or did not exist, a new one was created, often in house. This has resulted in a plethora of databases being created with some departments having multiple databases in use. Islands of data exist all over the agency. APTA recommends consolidating data across the agency, making use of existing databases that would serve the whole agency and migrating data from those that are not maintainable or robust enough to support agency needs.
2. The 5 year Corporate Plan establishes a clear vision for the agency and the value and importance of safety in achieving that mission. The roles and responsibilities for carrying out the safety portion of the business plan seem to be confused. Some of the duties overlap and in some cases there is a gap in ownership or a hesitancy to act on it – is it corporate or departmental? Many times we heard a program referred to as “that’s a corporate safety program” or “that’s one of our programs” based on where it originated. Almost as if these programs were separate and independent of each other. Clearly there is a lack of vision or ownership that is preventing staff from understanding that there is only one TTC safety plan to which all of these efforts and programs are an integral part of and roll up to. APTA suggests development of graphics and training on Safety Management Systems that display the interconnectivity of programs and departments in leading or supporting safety functions across the organization which will allow staff to “connect” or “visualize” their contribution to the overall effort.
3. The review team found many programs and practices that were quite good and even several of them tagged as “Industry Leading Effective Practices”. We also found that most of these had value in other areas and departments of the organization but were unknown to those areas and departments. The safety consultants embedded within the departments began a voluntary and informal weekly meeting in which they discovered and shared knowledge of these isolated “best

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practices” and have seen value in transferring this information into their respective departments. Steps are in place to formalize these meetings and mine down for additional information that will be useful across the organization. APTA finds this to be a good direction and start but suggests that additional opportunities be created to collaborate and share approaches to safety programs and practices both within the TTC and by networking with other transit agencies or industries.

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PILLAR 1: SAFETY POLICY & PROCEDURES

Element 1: System Safety Program Plan Development and Communications

Effective Practice

1. The Senior Management Team of the Toronto Transit Commission (TTC) is approximately two years into transitioning from an implemented System Safety Program Plan to a Safety Management System. The Safety and Environment Department has become a stand-alone group independent from line management and now reports directly to the CEO. At the same time, “Safety Consultants” have been embedded in the framework of each of the various departments to foster the 2-way communication between the corporate level and the front line level staffs.
2. The SH&E Management System Policy has made available to all employees with copies posted prominently in accessible locations and on the S&E Department’s intranet website: http://home.ttc/safety/cso_web/documents/SafetyPolicy.pdf
3. A Customer Satisfaction Survey has recently been conducted and the results are generally favorable. Such surveys are critical to the Commission/s Management Team, as the results provide the impetus for future Plan development, including timeliness in the delivery of “promises.”
4. There has been a great effort put forth by the CEO in attempting to engage employees by creating / attending more than eighty (80) “Town Hall” / “Road Show” presentations, which have seen more than 8,000 attendees. The efforts have been at hours beyond “Normal” business hours and on days other than week days in an attempt to familiarize staff of the desire to gain support for and change the existing paradigm.
5. In an effort to increase the perception and culture that accepts safety as an on-going way of life at TTC and changing the image to make staff believe that Safety is on their side and is a truly supporting asset; a new position (Safety Consultant) has been created within each front-line Department to demonstrate that having safety embedded within each Department will foster greater buy-in to the concept of Safety is embedded into all we do.

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Action Needed


6. Although there are documents, e.g., the SH&E Management System *Corporate Procedure – SH&E Legal and Other Requirements* that are under development at the time of the review, progress is being made and tracked (document-by-document) on a Gantt chart that demonstrates the commitment to complete and monitor progress. The process should continue as planned and APTA suggests that charts be prominently displayed at all locations to demonstrate the progress being made using graphics that indicate the relationships to each other rather than isolated to a single task or to a single department.
7. APTA has noted that the TTC has initiated some progressive measures to address the departure from a historically centralized safety department team approach to the decentralization of some safety responsibilities to the departmental safety consultants and the creation of a Corporate Safety reporting directly to the CEO. This is a new structure for all concerned which has been constrained by moving too fast in some areas, too slowly in others and is particularly limited by the few formal and informal means of communication between corporate safety and departmental consultants and across departments. The proposal to staff a Senior Safety Consultant with responsibilities to coordinate with the Safety Consultants will help to partially address the safety issues, however it does not address all of the integrated management issues that are connected to it. APTA recommends that the TTC assess its SMS program implementation strategy from an integrated management perspective, incorporating lessons learned to evaluate and mitigate the barriers that negatively impact the successful implementation of the safety program elements.

Element 2: Policy Statement & Authority

Effective Practice

1. The “Safety, Health & Environment (SH&E) Management System Manual” (Document #: (TBD), Revision: 2, dated October 23, 2014), meets applicability requirements, identifying CEO and the TTC Board of Commissioners as having the authority to create and establishes senior management’s overall intentions and direction with respect to Safety, Health & Environment.

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Element 3: System Safety Program Plan Purpose & Scope


Effective Practice

1. The SH&E Management System Manual and the supporting documents, SH&E Management System Document Guideline, the Occupational Health and Safety Plan well describe the Commission’s purpose and scope
2. The progressive development of the TTC safety culture has been an ongoing priority as demonstrated by the prior Work Safe program and the current SMS initiative. Staff continues to utilize Work Safe processes considered useful to their safety program needs. APTA acknowledges the continuity of commitment to programs designed to promote workplace safety and engage staff.
3. One program that has been effective in providing ownership for safety is associated with decentralized management accountability. TTC is implementing a designated Landlord responsible for their respective area or facility, who will be the point person associated with the management of a group of stations and is the designated “Risk Owner” in the new Enterprise Risk Management program. APTA commends this initiative and encourages the TTC to progressively expand the Landlord management accountability program with a continued emphasis on safety and risk reduction.

Action Needed

4. The TTC does not have a national rail regulator for system safety – only a regulator for Occupational Health and Safety of the Workforce. This makes self-regulation by the TTC all the more important as the Commission relies on its own initiatives to advance its role as a safe, efficient and effective transportation provider in and around the City of Toronto. Accordingly, it is incumbent upon TTC’s management to adopt published Standards and Recommended Practices for rail and bus in an effort to become “defensible” for its action(s). Evidence exists to demonstrate that some Departments have made the effort to examine published Standards and Recommended Practices, such as ISO and APTA, and conducted a gap analysis to provide assurance they meet / exceed the elements provided. However, the examination / gap analysis has not been formally applied across the Commission. APTA recommends the adoption of applicable standards by TTC.
5. Departmental staff have stated that corporate programs were not well understood or well received as they were perceived to be from the top down with little engagement from those


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ultimately responsible for implementation. As a result, some of these programs were seen as not having value when in fact they did. APTA suggests that the TTC evaluate how it engages departmental stakeholders in the development and implementation of corporate driven safety programs and develop not only guidance, but also the resources (such as databases) to support a more efficient process. This suggestion applies to engagement of the departmental stakeholders during the rollout of the SMS program. A comprehensive development and phase-in process would consider the development and implementation of these elements, not only for content purposes, but also design and resources for system wide implementation, particularly looking at uniformity of data quality, collection and tracking. This would help address comments from the departments concerning the differences between their inspection criteria and corporate inspection criteria as related to bus pre-trip inspection as one example.

6. The TTC has been proactive in its goal to expand employee engagement throughout the organization. The visits by the CEO were perceived to be a good start and were welcomed. Staff articulated that this was the first time something like that had happened. In addition, other opportunities to connect with staff were suggested such as re-issuing the in-house *Coupler* magazine in paper copy to increase engagement opportunity with all employees. The “hidden message” here may be that there is an electronic literacy or accessibility issue with employees or that the *Coupler* magazine serves a greater communication function in paper than previously considered. APTA suggests TTC stratify communication methods, survey the effectiveness of each method (accessing literacy, language, content, etc.) in support of the staff’s suggestion as opportunity to expand ways to engage the employees.

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Element 4: Goals


Effective Practice

1. At the high level, goals are well-stated and call for the establishment of annual goals of all management positions cascading downward. The statements are very clear.
2. The existing Employee Performance Appraisal program requires each individual to have at least one safety goal for the year.

Action Needed

3. The TTC has been in the practice of developing goals for many years. However, in the past there was little evidence that a goal was a target, which was made or missed as a course of doing business. Evidence exists that some areas of the Commission understand that goals cannot be achieved without establishing a cohesive plan, implementing the plan, evaluating the plan and amending the plan after the results of the plan are available, e.g., the Bus Operator Assault Committee’s plan. Plans do need to be created so that success can be measured; absent a plan a goal is subject to random chance to be successful. APTA suggests establishing expectations for both setting and achieving goals.
4. On the job injury reduction goals are set by the department managers and reviewed twice a month. The Corporate level of the organization receives a report out of the number of incidents, lost work days cases, and lost work days etc. If an injury occurs, the new Incident Investigation (Level 1 & 2) Report process is followed only at the department level. The setting of goals and reviewing them to reduce employee injuries at the department level should be on a common database to allow for trending and analysis across the agency. APTA recommends rolling up both data and actions taken at the department level to make them visible at the corporate level enabling a strategic approach and providing lessons learned that could benefit all operating departments.

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Element 5: Identifiable & Obtainable Objectives

Effective Practice

1. The “Biohazard Control Program” (Rev #: 00, dated March 7, 2007), the “Hazardous Materials Control Program” (Rev #: 00, dated March 12, 2007), the “Corporate Respiratory Protection Program” (Rev #: 02, dated May 2014), the “Corporate Standard Designated Substances” (Rev: 2, March 26, 2014), the “Confined Space Entry Program” (Rev #: 02, dated November 2013) are each Controlled Documents and have been implemented.
2. The various infrastructure department managers have created sixty key performance indicators (KPIs) which include but are not limited to the KPIs created at the corporate level. The KPIs are tracked monthly in an effort to support the safety and productivity initiatives within their departments.
3. Operations-based Key Performance Indicators (KPIs) managed and reported by the Transportation Department include reliability, traffic delays, and infrastructure performance. KPIs are reported down to line personnel weekly and via a monthly report up to the Safety Executive Committee (SX).
4. In an effort to improve streetcar on-time performance and reduce “short trips”, management worked with scheduling and operations groups to modify the schedule. Using KPIs, the management showed a correlation with other tangible benefits derived, namely reduction of lost-time injuries (LTIs) and incidents. This not only demonstrated the key relationship between operations and safety, but the importance of using data driven KPIs in business decision making.

Action Needed

5. The various maintenance department heads have established a reliability, accountability, maintainability and safety (RAMS) group to support their department’s productivity efforts. This group is currently establishing guidelines for document control within the maintenance groups. For documents to be reviewed for a change initiated by a shop, the RAMS group leads the effort for the Rail Cars & Shops Department, in collaboration with the department’s imbedded safety consultant. In this respect, the change management practices for Rail Cars & Shops differ from that of other departments. RAMS is a maintenance strategy that is unique to this department. APTA suggests TTC investigate the benefits of installing a RAMS concept on a corporate level.
6. Safety Key Performance Indicators (KPIs) are considered to be owned by each respective department and are reported up to each department’s head and ultimately to the Chief Operations

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Officer reported through the Safety Executive Committee meetings amongst executive leadership or required to be reported in the weekly Visual Management Center (VMC). Corporate safety-driven areas of priority are not reflected in KPI's currently reported with the exception of lost-time injuries (LTIs). APTA recommends the development, analysis of, and reporting of safety KPIs from all departments be incorporated into a single corporate wide database through the corporate safety department's safety assurance processes to allow them to tracked, analyzed and trended across the agency instead of just at the department level.

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Element 6: Strategic Planning


Effective Practice

1. Strategic planning has taken place as a first step, with the issuance of the Inaugural TTC Five-year Corporate Plan. The plan is to be updated annually to reflect progress made and to incorporate new work streams as they become necessary. Along with any regulatory or board requirements, evaluation of the Customer and Employee Satisfaction surveys will have an impact on the Commission’s strategic Plan.
2. Safety consultants were found to be well received by all departments interviewed. The main benefit articulated by departmental managers was that they are now not just given a list of problems by Corporate Safety, but have staff resources available to work out the solutions and implement. APTA acknowledges this reallocation of safety resources to address existing barriers to the successful implementation of sound initiatives presented by Corporate Safety.

Action Needed

3. The development of local and corporate safety initiatives is clearly not integrated and a “push and pull” approach prevails to decide what gets done. APTA suggests an overall HSE improvement program should be developed and priorities defined "up front" with discussions with line staff with the usual planning contingency allowed for unexpected activity.
4. Based on the interviews conducted there is little evidence (within line departments) of a strategic planning process being used in the implementation of the safety management system (SMS) plan objectives, goals, responsibilities, authority or dissemination of progress. Most refer to the 5 year Corporate Plan as filling that need. APTA recommends the TTC formalize a strategic planning process to ensure the SMS implementation has higher visibility throughout the organization and is consistent with the corporate plan integration.

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PILLAR 2: SAFETY RISK MANAGEMENT

Element 7: Hazard Management

Effective Practice

1. A new Incident Investigation process has been rolled out across the Commission, including categorization of incident levels. The process defines who can undertake investigation at different levels and training is being provided as a part of the roll-out.
2. Calls of hazards observed in the system (i.e. passenger amenities, illegally parked cars) are routed to CIS for immediate resolution. If necessary, supervisors, line supervisors, and chief supervisors are dispatched to the scene to assist.
3. Hazards involving the “2nd train” (Streetcar) and passengers boarding/alighting at streetcar stops are mitigated by SOPs as per the streetcar rulebook (2013). The SOP specifies that Operators are required to sound the gong and cover the brake in advance of passing a streetcar servicing a stop in the other direction. Compliance to the SOPs is verified during supervisor checks. APTA commends these practices targeted to mitigate the specific hazard considered to be a high priority.
4. An Assault Prevention Team has been established. Among other activities, the Team is currently tasked with assessing the effectiveness of the presently non-mandatory use of the upper and lower operator shields. The shield use (upper/lower) has been added to the Incident Investigation Form used by Supervisors as a way to capture data for hazard analysis. Furthermore, a new TTC policy was recently enacted, which no longer requires operators to ask that customers produce ID in conjunction with certain passes. The Fare Challenge Policy has been revised such that the operator is asked to first observe, then (if necessary), engage and finally (if necessary), report. These policy decisions came as a direct result of the Assault Prevention Team’s findings that a vast majority of assaults were fare-driven. APTA commends these efforts to mitigate the risk of operator assaults throughout the system and considers the multiple department Assault Prevention Team concept to be an **Industry Leading Effective Practice**.
5. In the Rail Cars & Shops Department, standard inspection SOPs have been revised in response to trends in Occupational Injuries (OI). The measures include new clear indications of “power on / power off” throughout maintenance SOPs. Through Job Hazard Analysis (JHA), the RAMS Department became aware of further opportunities to mitigate the risk and enhance standard lock

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out/ tag out procedures, i.e. the standardization of symbols to warn when energies of all kinds (including kinetic, mechanical, electrical) are present.

6. The Subway Infrastructure Department’s Hazard Identification and Risk Assessment (HIRA) that was created in March 2014, which only applies to three (3) employees who are responsible for “Oil Interceptor Purging” at Wilson is a good demonstration of the application of considerations warranted in the creation of a hazard assessment.
7. A new corporate Enterprise Risk Register is being developed that will include system safety risks. Much work has been completed in populating the risk register database and the program now calls for risk workshops to be conducted with future “risk owners”. APTA commends the TTC for its commitment to this initiative.

Action Needed

8. The new Enterprise Risk Register initiative will take a couple of years to fully implement (2017). In the interim, APTA recommends reinforcing departmental hazard management processes as a means to increase awareness of the importance of hazard identification, reporting, assessment, and mitigation. Awareness of the new Enterprise Risk Management system is not clear at the department level. Workshops are underway on a controlled rollout, however the lack of information sharing creates a risk to project success and the ERM department is not fully staffed to carry out the consultation based departmental rollout the plan is based on. APTA believes this is the right direction and the right approach but suggests reassessment of the time frame for implementation to provide some degree of urgency for implementation.
9. Hazard and Risk analysis departmental work methods are not consistent in their application. APTA recommends the establishment of a standardized hazard management database process to capture hazards across the organization (Hazard Log) that can be transferred to risk register as designed.
10. The hazard management processes are focused on occupational health and safety needs. New assets/systems are developed by the contractors and turned over to TTC upon project acceptance to add to the risk register. However, there is a need to apply hazard management processes to existing systems, customer and general public safety related exposures. APTA recommends extension of the hazard management process into the areas of existing systems, customer and general public safety.

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Element 8: Accident / Incident Reporting & Investigation


Effective Practice

1. A memorandum of understanding has been established with the Toronto Office of the Chief Coroner to more efficiently manage scenes in the aftermath of track level suicides within the system. Under this arrangement, certain TTC staff are trained and authorized to photograph the scene in accordance with the coroner’s protocols, as a measure to return to regular operations more swiftly and to reduce the potential emotional impacts on affected employees and enhances restoration of service and customer satisfaction.
2. Road supervisors are provided accident investigation training from the in-house training department.
3. The Chief Supervisor position is considered to be “the best trained front-line employee in the company.” He/she is cross-trained in the transit control center operations, dispatch, rules, procedures, incident command and accident/incident investigation protocols for all three modes by Toronto Police Services. APTA commends this **Industry Leading Effective Practice**.

Action Needed

4. Although there have been ongoing reports of “near misses” there was no clear definition of a near miss provided and they may be reported on at least three different types of forms, all with different data sets to capture the information. APTA recommends that the TTC develop a “Near Miss” program with definition of what constitutes a “near miss” and include this information in its applicable rules, procedures, reporting and training programs.
5. While supervisors are adequately trained to respond to and investigate collisions and incidents, department safety consultants do not receive such training. APTA recommends all safety consultants be trained on safety incident/accident reporting, investigation, and analysis SOPs.

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PILLAR 3: SAFETY ASSURANCE

Element 9: Safety Data Acquisition & Analysis

Effective Practice

1. As a Safety Assurance Check conducted by the Department, a Shop Foreperson conducts monthly observations of his/her employees, utilizing a checklist. The checklist is periodically audited against performance, by the Senior Foreperson.
2. Bus Transportation has been proactive in the development of an in-house Access Database designed to track and analyze safety performance throughout its system created by a local staff member. Rail Transportation is now adopting such a system to support its safety information management needs. Bus Transportation is also committed to the deployment of a *DriveCam* system on its buses designed to reduce collisions, injuries and improve overall system performance. These are proactive information based system initiatives created to support local management.

Action Needed

3. A monthly statistical report (“Report on Key Performance Indicators (KPIs)”) is produced for the SX committee. This is a 60-plus page document, with an Agenda Time Allocation of 10 Minutes. It is suggested that the report is reduced in length / summarized by priority for the committee, or that reporting is “by exception” to show only those issues that need resolution. It was noted that the statistics presented do not make use of “control charts” to show statistical significance of trends of particular items, e.g., Lost Time Injuries. The risk here is that the SX Committee may focus on issues that statistically are not issues at all. APTA suggests the monthly report introduces the use of Control Charts where appropriate to better inform the Committee of statistically significant trends in HSE performance.
4. The statistics presented at SX Committee do not show asset-related data, e.g., rail breaks, slow orders, etc. It is possible that TTC does not experience frequent asset problems that impact service. However, if such was the case and the monthly report focused the “exceptions,” then APTA suggests asset-related data be “tracked” but not to interfere with what is being reported as an existing KPI.
5. Presently, there is no corporate level safety action tracking system. Methodologies to track data vary according to whatever degree a department’s HS&E representative is comfortable. APTA

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recommends corporate safety actions tracking system should be purchased and/or developed to enable action plans and actions to be input and updating data can show trends according to the needs of the Commission.

6. Visualization Boards were observed in the Executive Building that demonstrated current and recent KPI performance. Similar KPI tracking can be found on bulletin boards, in offices and hallways, based on what each department has identified as within their areas of influence. Consequently, there are a lot of KPIs being tracked (“We’re swimming in KPIs”) and the priorities that each may receive may be viewed differently across the levels of employees and management. Communication is enhanced when the ones being informed can see the progress being made. APTA suggests that consideration is given to mapping out current use of KPIs and developing a visual display for all message boards that are common core performance areas showing progress against goal and the relationship they have to department performance.
7. The implementation plan for the development and roll-out of the SMS remains in a draft form; partly because agreement has not been reached with the delivery departments on “what” they need to do “by when.” Resolution is needed before a credible plan can be implemented. The roll-out is being accomplished in an “opportunistic” manner, i.e., “every six months - roll out a bit more,” according to what is perceived as able to be handled. APTA suggests a collaborative planning process be implemented that can assess and prioritize the strategic needs of the SMS balanced with the resources needed to be available in implementation.
8. Corporate Safety has gathered over 30 years of paper industrial health and safety records and testing data for the respective facilities. There is no database available for tracking and analysis by job code or other measurement. These records could be valuable in supporting ongoing industrial health and safety management efforts even if only 5 or 10 years of data was available. APTA suggests TTC evaluate system opportunities to address this need.
9. There are currently no recommendations provided by the corporate safety department on how to improve or address non-compliance or non-conformance. Furthermore, no corrective action log or similar coordination between the corporate safety department and the affected individual department exist to manage the feedback loop and track the corrective action to closure. APTA recommends these enhancements be made to the SA protocols to improve the internal safety audit function and to formally document that the appropriate actions were taken to resolve areas of non-compliance or non-conformance.

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Element 10: Configuration Management


Effective Practice

1. Bus Maintenance was able to outline the change management process for new / revised procedures, including approvals by Supervisors and Managers and using an implementation sheet that ensures training, audit-compliance, reporting and final close-off exists; as well as signing off by impacted personnel, i.e. technical analysts (TAs) and vehicle technicians (VTs). Ultimately, the Joint Occupational Health & Safety Committee signs off. All decisions regarding changes are routed through “Technical Support” for creation / implementation of the Standard Work Instructions (SWIs).
2. Monthly joint meetings are held between the safety consultant assigned to the bus maintenance department and technical support services (TSS) and Information Technology (IT) to discuss trends and configuration issues across multiple divisions. APTA commends the collaborative effort.
3. Preventive Maintenance Inspection (PMI) procedures conducted by the coach technician are routinely audited by the engineering technician (who is independent of the shop and part of a different group-- engineering). APTA commends this QA/QC practice.

Action Needed


4. Generally, overarching change management and document control tools are not applied across the Commission. Change management of the corporate SMS is not done through a formal change management process, but is consulted upon. The same applies to lower level SMS materials. This is inefficient and tends to rely on extensive consultation to reach consensus. It creates a kind of “anarchic democracy,” where everyone’s vote carries the same weight. Governance and change management of the SMS at all levels should be through defined processes, of which consultation has value, but has single points of accountability for decision making. APTA suggests a formal change management process be developed at the corporate level.
5. The Corporate Biohazard Control Program (March 7, 2007) specifies the Biohazard Control procedures are to be reviewed at least annually. Controlled Documents have a requirement that such documents have a review frequency stated as a part of the document. While the cited document may have been reviewed at least annually for the past seven (7) years and there has been no need for a revision (we are not certain where the Superintendent – Occupational Hygiene and Environment Section, Safety Department now resides), APTA recommends the following:

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- Such Controlled Documents are maintained with a Review / Revision Page to indicate the date(s) of the reviews and the nature of a revision, in the event one was warranted;
 - Adding the necessary clause(s) to Section 2.10 (Track and Structure) – “Utility Crews are responsible for: Assisting with the initial clean-up...Conducting a final clean up...” following a Priority One to specify that a 3rd Party Contractor will be utilized to clean up a Priority One in the event the victim is a TTC employee and,
 - Utilize a 3rd Party Contractor to clean up the track area and rail car undercarriage in the event the victim is a fellow TTC employee.
6. Controlled Documents usually have a requirement that such documents are to be reviewed / revised as warranted at a specified frequency and the frequency is stated as a part of the document. The “Hazardous Materials Control Program” (Rev #: 00, dated March 12, 2007) contains no such statement and, therefore no apparent reason to be reviewed / revised. APTA suggests the next revision of the Program:
- Adds language that specifies the frequency of the Program’s frequency of review / revision
 - Is updated to specify all aspects of the Global Harmonization System (GHS), especially the training requirements, as full implementation was to have been completed.
7. Review of the Wilson Car house “Inspection Gauge Check Sheet” (702-777-02, Rev 0 in the Header) with a “Revision Date: May 01, 2014” in the Footer) that indicates being completed October 30, 2014 shows “Required Calibration Frequency” of ten (10) items showing a 12 month cycle that are written over with a “6.” Documents specifying “Rev 0” but with a Revision Date and frequency requirements change by hand-written numbers is not considered acceptable practice. APTA suggests review of the procedure to determine if it needs to be improved or if training is less than adequate for those using the procedure.
8. Change control of the system modification process is more mature within capital programs than at the local departmental levels. In discussions with staff, a process for proposing, assessing, approving, implementing and monitoring system modification was established but not formalized. APTA suggests that Corporate Safety liaison between Capital Programs and with affected departments to formalize this change control / modification process at a corporate level.

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9. Corporate Standards have been created by the migration of the information contained in the TTC System Safety Program Plan into a Corporate Standard. The Corporate Standards, e.g., Management of System Changes (Revision 4, dated March 2014) was Section 2.7 “Management of System Changes” of the SSPP. The document indicates the last Revision included only minor housekeeping updates. While this permitted the appearance of a recent review of the document, the reality is that a substantial and thorough review of the document needs to be accomplished to ensure that it is alignment with the new Safety Management System concepts adopted as part of the Integrated Management System. The document does not indicate / specify the review frequency, but does state, the “date of this review and update is yet to be determined.” A control document of this importance should be reviewed and updated on an established frequency. APTA recommends a target date be established for review and updating.
10. No corporate template for safety SOPs currently exists. Rather, they are driven by each department independently which is a challenge when organizational structures change. APTA has previously recommended a corporate document control policy be developed, and suggests that an electronic document control policy be considered the most practical way of doing so. In addition to establishing a basic template for the standard issuance and control of SOPs, the document control policy should direct the following actions;
 - a. developing a list of all safety/security critical documents to be managed;
 - b. assigning an owner of each document;
 - c. developing a review interval for each document;
 - d. create a review process (committee, panel, individual, etc.);
 - e. signatory requirements;
 - f. distribution of each document and;
 - g. selecting a manager of document control who will manage the process ensuring consistency and timeliness.
11. No current executive level configuration management committee exists. Each department is left on their own to understand and design their configuration management process. The Capital Project department has a very robust and extremely sophisticated configuration management process in place. The TTC would benefit greatly if the capital projects configuration practices could be used as a model and trained to the appropriate departments. APTA suggests TTC consider chartering such a committee to guide the configuration management process consistently across all departments.

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12. The decision to route all provincially required utility and infrastructure locating requests through internal resources, has put a strain on multiple already-taxed departments within the organization, including those with safety critical work assignments where fatigue can be an issue on key functions and teams. Reportedly, the electrical engineering unit receives on average 60 calls for service per day, while the tunnels/infrastructure unit tasked with receiving calls receives over 100 per day. As many calls result in site verification and engineering services by units within the Engineering, Construction & Expansion Department as well, the procedural issue is having a widespread, adverse effect. APTA suggests TTC conduct an analysis of the workload and resource effects and take appropriate action, to ensure these resources do not adversely impact safety critical functions.
13. The Corporate-level Safety Management System documentation is “owned” by the corporate safety team; however, they do not own or manage lower level documentation. There is no corporate standard to which the departments must work in developing and updating their individual management systems and associated documentation. This is a significant weakness, which could lead to a mix of “good” and “bad” departmental SMS’s - with no certainty that over time they will be improving. APTA recommends the development of a document management hierarchy system that coordinates development and review of controlled documents.
14. As a safety initiative of the department, ECE has begun re-writing all departmental procedures and retraining all affected employees on the changes. From a configuration management standpoint, while it certainly commendable that such an effort is underway, the lack of a coordinated review by the corporate safety department throughout this process is of concern to the panel. The effort is department-driven. APTA suggests any large-scale efforts to drastically refresh or revise whole department SOPs or policies be reviewed by a corporate safety unit, to ensure the effort does not adversely affect the safety basis of other procedures, and to manage any document control processes effectively.
15. During the meeting with the Human Resources Department, the review team questioned the previously-received information that the Subway Infrastructure Department had two hundred (200) vacant positions. The Human Resources Team indicated that such was quite possible and that the actual veracity of the statement would be very time-consuming to answer because, while a single-database of TTC positions, both vacant and filled, does exist, it is not maintained on a regular basis outside of the once-per-annum budget process, and it does not exist in a format that lends itself to reporting in a modern, manageable Excel format. The review team was informed that the I.T. department, in tandem with Finance and HR, has a budgeted plan to implement a Management Information System which will, among other functions, effectively track

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vacancies. In the meantime, as a separate project, HR is working with I.T to develop electronic org charts that will be updated regularly, and fed from a manually updated database reflecting all TTC positions, both filled, and vacant. Once the MIS system is in place, it can be used for source data for these org charts. APTA suggests the completion of such projects, especially if they will aide in the tracking and reporting of vacancies, so that management is able to more effectively plan and manage positions, including making more informed decisions about which vacancies to fill, and when, as well as when to seek approval for additional headcount.

Element 11: Safety & Security Certification


Effective Practice

1. The Engineering, Construction & Expansion Department (ECE) has taken on several initiatives specific to its own developed “safety focus”, including; development of department-owned Health & Safety Management Plan, review of functional designs and construction documents for safety and security, and safety certification of large projects. APTA commends the current departmental safety initiatives.

Action Needed

2. Presently there is a form on the Finance Department webpage incorporates Safety certification budgetary requirements into the overall budget process for capital projects. There is a whole section in the existing SSP that covers the requirements for Safety Certification and this section is being transitioned into the new SMS but no formal policy or plan exists currently at the corporate level with over one hundred projects in process, APTA suggests a safety certification policy be implemented and that it is applied consistently, led by the corporate safety department.

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Element 12: Safety Assessment

Effective Practice

1. Ride Checks are conducted of bus operators, including a standard program known as the “Assessment of Defensive Driving” (ADD). It consists of an assessment of the operators conformance to defensive driving techniques such as continual scanning, foot-over-brake, “rock & roll” (the operator physically shifting to obtain optimal lines of sight during turning/lane shift maneuvers), etc.
2. Exceeding the Ministry of Transportation of Ontario requirement to perform three standard brake checks as part of the pre-trip or “circle” check, TTC has adopted a requirement for each operator to conduct six distinct checks related to air pressure and emergency brake functions. APTA considers this to be an **Industry Leading Effective Practice**.
3. The Ride Check program to evaluate bus operator performance includes a clandestine/plain-clothes component whereby supervisors from other divisions are tasked with performing the ride check of the bus operator. To avoid detection by the operator, the practice includes the technique of using a standard, public metro fare card (as opposed to an employee transit pass) upon boarding. APTA commends the thoroughness of the practice, and the efforts to accurately gauge service delivery and safety throughout the system and considers it to be an **Industry Leading Effective Practice**.
4. As a part of the Operator Excellence Guidelines, newly qualified operators receive the QA/QC checks during the first year of service at 3-months, 5-Months and 10-months before falling into the annual program. APTA commends this risk-based approach
5. Twelve internal audits by the Subway Transportation Department are conducted on no less than a quarterly basis; among them “point and acknowledge” guarding at stations (door operations by the conductor aboard each train); PA calls and announcements; and deadheading through stations. Results of the audits are reported up to Department Heads for immediate resolution, as needed. In parallel to this audit component (and to some degree, informally coordinated), the Corporate Safety & Environment Department also conducts five individual audits. APTA commends this risk based quality assurance arrangement between departments
6. The Corporate Safety and Environmental Services department (SES) will conduct approximately 80 audits per year, the equivalent of one thousand audit hours. The risk register is used to direct audit activity. APTA commends this.

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7. The SES department has developed a System Safety Review database to track audits performed and corrective actions taken. APTA commends this.
8. The Safety Executive (SX) Committee tracks the corrective action plans (CAPs) to ensure timely and appropriate closure occurs.
9. The Joint Health and Safety Committees at the various work sites meet monthly to address safety hazards and safety issues raised by the workforce. The meetings are documented with agenda and attendance is taken. Safety items and hazards not able to be immediately closed are carried over to the next meeting. At the end of the meetings, a facility inspection safety audit is performed and any defects are noted and added to the agenda for the next meeting.
10. The infrastructure department conducts monthly work site audits including PPE, thermal weld, and work car use.
11. The 2013 restructuring which embedded the role of “safety consultants” in each department has been overwhelmingly well-received by department staff. This design is to allow two-way communication and feedback mechanisms which enable the corporate safety office and line departments to collaboratively address issues in a timely manner.

Action Needed

12. As part of ongoing “Route Checks” supervisors target their observation of route performance based on informal trend analysis of complaints or newly reported hazards. There are no formal plans or procedures dictating this practice. APTA suggests the Bus Transportation Department further enhances this program by establishing formal procedures which direct the coordination between ongoing hazard analysis with the QA/QC audits / inspections being performed by front-line Supervisors.
13. The Rail Cars and Shops Department has created its Quality Control Program that specifies the management team’s audit responsibilities predicated upon their perceived risks. The Program identifies (among other things), the “unmitigated risk” of each item, the average conformance rate of previous audits, the proposed target, the audit structure and frequency, resource requirements and interactions with other departments. The Quality Control Program reviewed by the review team noted the document is undated and references only previous Audit Averages from “2011 / 2012.” The document indicates the Quality Control Program has not been implemented to-date in 2014, even though some of the checks are to be conducted quarterly. If fully implemented, such a risk control program could be quite effective. APTA suggests the Rail

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Cars and Shops Department consider re-activating the program for a prescribed timeframe in a modified configuration and monitor the results for effectiveness.

14. The safety consultants recently imbedded in departments throughout the TTC are developing their priorities and standards seemingly on their own. While the safety consultants meet as a group once a month there does not seem to be adequate interface with the corporate safety department. APTA recommends improvements in communication to ensure that the safety consultant roles and responsibilities are developed and carried out consistently and that formal lines of communication are clearly understood. [Safety Consultants meet on a weekly, not monthly basis.](#)

15. In the wake of the organizational shift towards the imbedded “safety consultant” approach, Department Heads who sought additional safety consultants than what was allotted have taken different approaches to securing “imbedded” safety resources. One Head reportedly sought an additional safety consultant staff and was directed to “negotiate” positions to fulfill a “zero based budget”. Another Head instead created and filled a “program manager” position tasked with health and safety responsibilities specific to their department. The lack of guidelines or organizational framework criteria appears to have, at least in part, created disparate departmental efforts to lead safety initiatives and perform safety-related functions within each department. APTA recommends TTC evaluate and develop corporate guidance and policy in regard to the resourcing, roles, and responsibilities of “safety consultant” staff, and to the extent possible, eliminate duplication of efforts by consolidating or re-purposing positions which may have overlapping safety responsibilities, such as “health & safety project managers” or similar.

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PILLAR 4: SAFETY PROMOTION

Element 13: Infrastructure Maintenance


Effective Practice

1. A daily building inspection focused on environment and safety items is conducted by a Bus Maintenance Department employee.
2. All confined spaces have been identified and classified as a confined space or a Permit-only confined space.
3. The Asbestos Management Program (required under Section 8 of the OH&SA Designated Substances document continues, with annual building surveys.
4. The JHSC meets monthly to address safety concerns and hazards of their individual work centers. At the end of their meeting designated members of the committee perform a facility inspection. The inspection is documented and if the identified hazard or safety issue cannot be resolved immediately the JHSC member will bring the issue to the next JHSC meeting.
5. The minutes from the JHSC meetings are posted in the work areas of each work group to show the activities of the committee and to encourage input from other employee.

Action Needed

6. Neither of the databases in use to generate work orders for the Structures and Maintenance of Way departments (SMD & MOWIS, respectively), are adequate for reporting on the infrastructure's State of Good Repair. APTA recommends evaluating database needs for asset management and maintenance support functions that will provide for both existing systems and new extensions and rolling stock acquisitions.
7. For System Safety Reviews (SSRs), technical drawings are submitted to all stakeholders, including corporate safety. Sign-offs are obtained before the drawing is returned to the submitting party. However, in many cases, the process is driven by the "tenant". The process does not have a controlled, centralized "corporate" owner, but rather it is maintained and "owned" by the individual department requesting the engineered change. APTA suggests the corporate safety department serve as the centralized point of access for the system safety review process and that in consultation with stakeholders, it determines which parties need to approve the document and those who should be in the review loop before it is approved at a corporate level.

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Element 14: Vehicle Maintenance & Repair

Effective Practice

1. The Bus Maintenance Department is moving toward a Reliability Centered Maintenance (RCM) in its approach to performing its maintenance functions.
2. The Streetcar Procedures Group has developed or revised 12 of 20 Streetcar-specific procedures as current efforts are underway to refresh all of the Departmental SOPs.
3. Streetcar Maintenance utilizes an in-house Work Order information system (SMS) to generate its Work Orders and generate vehicle maintenance history as required. The Department conducts a Supervisory “60-Day Look-back” of “Repeat” maintenance data of each defect that occurs to a vehicle in revenue service.
4. 57 of 80 railcars of the new TR fleet have been delivered to TTC. Full delivery is anticipated by the end of 2015. A RAMS-based Maintenance Information System, along with supporting resources and policies are in development for the new vehicle procurement. In addition, Yard Maintenance Support Systems (YMSS) has been implemented as a maintenance information system to support the unique maintenance conditions and requirements. A move towards “predictive” maintenance is being adopted in conjunction with these innovative fleet maintenance practices. The RAMS team developed its own incident database which augments the corporate-required Incident Investigation form.
5. In recognition of the extraordinary demands placed on certain types of torque wrenches (measured to be over 5,000 uses per month), the department, in partnership with the imbedded safety consultant, took the initiative of voluntarily increasing the frequency with which re-calibration procedures are performed exceeding OEM specifications. In fact a request has been made to buy an on-site self-calibration tool for employees to use daily to ensure torque wrenches are within tolerance. Torque wrenches will still be sent out annually for calibration. APTA commends this practice.
6. For future vehicle procurements, efforts are currently underway to identify industry standards, best practices within the TTC and other projects, and other departmental needs and objectives, and develop a standard specification for what forms of hazard analysis and safety analysis would be required from future suppliers being considered before a contract is tendered. APTA commends this vehicle safety analysis and certification procurement practice.

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7. As part of the vehicle design and RFP, ergonomic studies were conducted to aid the development of technical specifications for the operator’s seating and controls, based on operator feedback and so as not to vary significantly from the existing fleet’s specifications.
8. TTC is in the midst of accepting delivery on the new TR fleet for its subway operations. As part of the acceptance, it maintains a staff person at the car-builder’s factory in Thunder Bay, tasked with on-site certification and testing. Final acceptance includes a provision to conduct a 56-day static inspection cycle.
9. As part of the procurement of any vehicle, change requests are handled through an Engineering Change Request, through the Procurement & Materials group within Engineering, Construction & Expansion.
10. Joint Health & Safety Committee discussion is tied directly to vehicle configuration modifications which are requested as a risk mitigation. An example given was the retrofitting of sun visors in the operator cab to mitigate the risk of sun glare causing temporary sight issues, upon the hazard being brought forward by the Transportation Joint Health & Safety Committee.

Action Needed

11. Other than at Rail Cars and Shops, there is no formalized Fleet Maintenance Plan that establishes preventive maintenance / overhaul policy, employee training / certification, Department objectives, spare ratio goal, procedures, etc. APTA recommends that Fleet Maintenance policies be codified to ensure safety critical processes are adequately addressed. A Fleet Maintenance Plan is typically used, per industry practice, to serve this need.
12. Review of calibration records of the Wilson Car House for torque wrenches and gauges demonstrated lists that appeared to identify all such wrenches and gauges. However, the lists did not contain any indication of the last date / next date of calibration and, in addition, the list of gauges contained items, e.g., “Go.No.Go” gauges that contained no listing of the OEM, Model # or Serial #. Absent such identifiers indicates the lack of traceability. This was also verified by a November 12, 2014 memo from the Safety Engineering Services Department with a Calibration verification rating less than 85% conforming against the Standard Work Instruction (SWI) 702-777. APTA suggests that the calibration program needs to be improved.

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Element 15: Rules & Procedures Review

Effective Practice

1. As a departmental QA/QC check, each streetcar operator receives an annual ride-along. In addition, the Department annually conducts four types of internal checks: “circle” (pre-trip inspection) checks, “Stop-Check-Go,” “Restricted Speed Zone” and “Speed through Switches.” Some of the checks are conducted in a “hidden” or unannounced check, rather than only as a part of a ride-along strategy. APTA commends the practice of conducting on-going QA / QC checks over various safety-critical aspects of operations.
2. Audit team review of the Operational Rules Committee Meeting Minutes of the August 13, September 10 and October 8, 2014 (without the attachments referenced in the Minutes), were found to be quite thorough, including Action Items, assigned Accountabilities and expectations of timeliness.
3. The bus transportation department began revising their Standard Operating Procedures (SOPs) approximately a year ago. To date they have created or updated 36 SOPs.
4. The succession planning joint group – comprising dispatchers, rail yard tower controllers, system managers, and supervisors—has initiated a cross-training program and participates in job rotation as a measure to aid succession planning and career path planning amongst department employees. APTA commends the management and staff for their proactive effort to help maintain a high level of institutional knowledge and plan for the future.
5. As part of the annual performance evaluation and appraisal for managers, a safety objective is required to be created by the manager and the supervisor. The manager is evaluated on their conformance to the measure. APTA commends the integration between safety and the employee’s performance appraisal.
6. As a proactive safety initiative within the Rail Cars & Shops Department, local management of car-houses and shops hold mini “site meetings” in collaboration with the department’s embedded safety consultants, which cover, among other topics, the creation of, and progress toward, targeted safety goals and objectives. The tie-in between these local safety goals and objectives and corporate initiatives is demonstrated. The meetings facilitate information sharing amongst divisions. APTA commends the practice.


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Action Needed

7. The Subway / SRT Rule Book Revision and Track Level Safety Committees were initially established following the completion of the investigation of a fatal accident in 2012. The formalized Subway / SRT Rule Book Revision and Track Level Safety Committees were initiated in July 2014 and May 2014, respectively. TTC has begun to take steps that are designed to improve the level of communication and defining improved efforts to clarify existing information and improve the level of safety for employees working at track level. However, such efforts are not making the progress that was anticipated, as evidenced by the fact that two members of the Track Level Safety Committee resigned their “positions,” due to the lack of progress being made. APTA recommends the TTC review the work of these committees to determine if they can be made effective.
8. The revised track level worksite coordination procedure concerning the roles of the Person In Charge (PIC) and Work Area Coordinator (WAC) is currently being reviewed for formal adoption. The document is reportedly “owned” by the Deputy Chief of Operations. It was not clear whether or not the Safety Department was involved in its creation nor whether the approval of the Chief Safety Officer is ultimately required. Considering the potential system-wide impacts, APTA recommends that such a procedural change be reviewed and approved by the safety department. Considering the strategic prioritization which places track level worker safety as a high priority (as a result of recent track worker fatalities), an authorization schedule be revised to reflect accountability of executive leadership.
9. Although undated, it is believed that following a fatality, a “Red Top Notice” entitled “WORK ZONE LIGHTS” was created on a document with a red-background header “Operations & Safety Group,” which dealt with the establishment of “Impassable,” “Major” and “Minor” Work Zones. The document was signed off by the (then) Deputy Chief Operating Officer Rail and numbered “06-261 Notice #89.” An exception is taken to the fact that such a document can be created and issued with such deficiencies and was not questioned by those who “read and understood” the information contained therein. APTA recommends tighter administrative controls over the way operating rules are initiated, modified or removed.
10. Red Top Notices are utilized to provide information to employees whose duties are affected by the information presented. Such information should only relate to the Subway /SRT Rule Book and serve no other purpose. That being said, the Notices contain no “Acceptance / Understanding Sign-off.” Individuals sign to indicate acceptance of the Subway / SRT Rule Book and need to sign off that Rule Book information has been changed in some manner. While Red Top Notices are placed on Bulletin Boards under headings “Must Know,” “Need to Know”


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and For Your Information” such Notices are created by many individuals and may lead to the placement of Notices on an inappropriate Board. The TTC has not established a Hierarchy of Documents Policy that defines the purpose of individual documents. APTA recommends that issues to be considered include:

- Identify the Subway / SRT Red Top Notice or Streetcar Red Top Notice as the only document to be issued to add, delete or amend a Rule and be on mounted on the red Board
 - Identify the authority (one job title) responsible for issuing a Subway / SRT Red Top Notice
 - Just as document control is applied to the Subway / SRT Rule Book, i.e., a sign-off to indicate receipt and understanding of the information presented
 - Sequentially number and date the Red Top Notice [NOTE: Individuals have stated that such is the expected form; however, there being no descriptive process defined, such errors are accepted.]
 - Specify that a Red Top Notice may only be cancelled and removed from the Red Top Notice Board by another Red Top Notice
 - Issue a comprehensive Red Top Notice cancelling each of the preceding Red Top Notices when all the information contained in the Red Top Notices has been included in the next printed revision of the Subway / SRT Rule Book
11. The section of the Subway / SRT Rule Book providing information related to “Operating Past Red Signals” specifies that a train that has “Keyed-by” (either automatically or manually) a Red Signal is to be operated at 15 km / h”...until your train passes the next less restrictive signal” and, “When the front of your vehicle has passed the next less restrictive signal, operate according to wayside signs and signals.” As the Red signal may have been caused by a break in the rail of the track circuits “protected” by that signal, APTA suggests that it is not a good practice to accelerate to the normal track speed when the **front** of the train passes the next signal, but rather when the rear of the train passes the next signal to protect against any part of a train being operated over a possible break in a rail at greater than 15 km / h.
 12. There is no requirement for follow-up Safety Briefings (documented or not) to be conducted in Work Zones when it has been noted that conditions have changed, e.g., weather conditions or an


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additional worker. APTA recommends use of APTA Standards for establishing work zone safety.


13. Within the week of meetings / discussions, the review team was not able to determine (to its satisfaction), the differences between the concepts of “Employee In Charge” (EIC, as specified in the Subway /SRT Rule Book); Person In Charge (PIC) and Work Area Coordinator (WAC). That being said, one of those titles has the responsibility for being *the point of contact* in charge of a work zone of some size. The designated individual conducts a “Tail Gate” Meeting with the employees to discuss hazards / safety mitigation measures, etc., related to the work within the work zone. The Tail Gate Meeting items (hazards / mitigations, etc.), is not documented and requires no sign-off to indicate understanding / acceptance / challenge for workers in the work zone; APTA recommends a written safety briefing and sign off be implemented. [NOTE: A Safety Briefing is documented at the initial place where the workers / employees report for work, which primarily refers to the JHAs appropriate to the individual tasks at hand.]
14. Rule 3.2.4 (Employee in Charge) states in part, “When leaving track level: 1. Ensure that no one in the crew is left behind...” APTA suggests adding reference to “and material” being left behind. Additionally, APTA suggests a Policy / Rule / Procedure to be added that requires the first train through the work zone(s) must operate Restricted Speed from Point A to Point B and report on the status of crew members / material left behind.
15. Following an incident in 2008 a “blue light” Train Operator warning system has been instituted in Revenue Hours. The system has not yet been introduced in Non Revenue Hours, although the risks are similar. APTA suggests a hazard analysis be performed on both revenue and non-revenue operations to determine if the risk is being adequately addressed.
16. Line Departments have operating rule books and are responsible for rules development, update and sign-off. The Rule Book Committee charter was not well defined and the authority to sign off rule book not formalized. Standard operating procedures (SOPs) are approved by local department heads as a means to supplement the rule book. APTA acknowledges that the TTC is in the process of assessing its current processes within each department as it relates to the development, modification and/or deletion of a rule and provide clear guidance as to who has authorization to approve such changes. In addition to this effort, APTA recommends that the role and authority of established Rule Book Committees needs to also be clarified as well as how these committees are linked across departments and to the Safety Executive Committee (SX). Finally, it is suggested that the TTC consider the Rule Book Committees to be supported by some working groups on specific topics and areas of focus as required.

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17. It was not clear to the review team as to why the Rule Book seemed not “applicable” to complex / multiple work zone requirements. APTA suggests that this gap be addressed with the next revision of the rule book.
18. The Track Level Safety committee conducted international benchmarking to identify good practice in this area. A number of initiatives were identified and Work Area Control was initiated as a trial. However, other proposed improvements were reportedly held up due to extensive consultation in the departments. There needs to be a greater urgency of improvement in this area. It is recommended that the governance of this program is streamlined to ensure proper input but against much shorter implementation schedules. It is also recommended that a strong cultural change program is associated with this project as it was noted that in none of the work areas visited was this program visible on noticeboards etc.
19. The 2013 revision of the Streetcar Department Rulebook largely did not involve front-line employees or line managers from all departments involved with Streetcar operations. Accountability for the Streetcar Rulebook was not clear in the discussions with staff. There does not appear to be a rules committee in place for assessing and updating rules, nor does the rule book appear to be issued over the signature of someone in authority. APTA recommends that ownership be assigned to the Streetcar Rulebook. APTA recommends rulebooks, directives and SOPs be regularly reviewed and that front-line employees be provided the opportunity to participate in the review process

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Element 16: Training & Certification

Effective Practice

1. The Training Department sets up individual training needs for any bus operator who bids on and receives any regular work out of a different division. For example, mandatory “line” training is provided for any operator moving to a different division, for all lines associated with that garage.
2. As a recruitment and workforce development measure, the Bus Maintenance Department has partnered with Centennial College to implement a four-year apprenticeship program. The program consists of eight weeks of courses once every year (over four years) in addition to TTC-delivered on-the-job training in the Department.
3. The Bus Maintenance Department accesses the Office of Training and Development (OTD) database (Pathlore) Learning Management System (LMS) to verify the currency of licenses, certifications and re-current training requirements to manage manpower requirements in a more-effective manner.
4. A 2-day requalification course is available for Streetcar Operators.
5. While the review team was touring the Roncesvalles Streetcar Shop, the team spoke with an individual who was on her first day of the job at the facility. The individual was a transfer from a maintenance position at Subway to a position at Roncesvalles. The individual was on a guided tour of the facility for orientation with the manager of the facility. The manager was equipped with a checklist that was quite thorough relating to the washroom locations, hazards to be noted, emergency evacuation plan, etc. APTA commends this.
6. Track Level training is centered on the Subway / SRT Rule Book and comprises 2 days initial training and 1 day refresher training each year. For those who access the track regularly it must be an 8-hour classroom refresher training program and not the abbreviated eLearning CBT. The initial training (2 days) includes a practical element on the tracks where “places of safety” are identified.
7. More than 1,600 Contractors were trained last year to permit track access in the performance of work. Staff are not required to carry a “certificate / ticket” to confirm they are in date for track access. Contractors who have the same training are required to carry a physical ticket and a dated sticker on their hard hat. Contractors are not allowed to be an Employee in Charge of a work site. They must be supervised by a TTC employee. TTC Employees in Charge wear a White Hard hat, although this is not a Rule.

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8. Subsequent to bus operator initial training and qualification, a 3-day recertification program is held based on a 5-year frequency. During that time, utilization of a VigilVanguard® system is implemented, which can verify (through four recording cameras) the Operator’s eye movements, curbing / cornering, etc. and demonstrate the good / bad habits that have been developed and documented following the Vigil experience.
9. Training room of mock-up subway environment and equipment is excellent; it enables workers to have hands on experience in various work zone protection arrangements and practicing communication protocols. As a follow up action from the Round Table, the initiative was completed timely and demonstrated prompt response to worker demand. It includes the ability to simulate calls to Traffic Control, set out “blue lights” for Revenue traffic Hours. It includes a simulation of what the driver will see when blue lights are set out. This is considered to be an **Industry Leading Effective Practice**.
10. A simulator of the new “Toronto Rocket” has been made a part of the acquisition of the new vehicles.
11. The new Incident Investigation (Level 1or 2) Report dated Jan 2014 was provided to the auditors. The training for how to use this new document has been provided to front line supervisors and managers. Both class room and computer based training (CBT) was available.
12. At least two safety consultants assigned to the Plant Maintenance Department have received the Board of Canadian Registered Safety Professional (CRSP) designation. While it was not a position requirement when the TTC shifted its organizational structure to effectively elevate the safety consultant role, many safety consultants in other departments share this distinguished professional certification. APTA commends the practice to encourage safety staff to obtain and maintain industry-recognized certifications.

Action Needed

13. Recertification training for Bus Operators currently consists of 3 days every 5 years. The Department is currently considering decreasing the interval as a program enhancement. APTA suggests the Bus Transportation Department continue its efforts to transition to a cycle of one to two days, and an interval of no more than two years.
14. Subway / SRT Rule Book Refresher / Requalification Training is said to be an annual occurrence. However, there has been a 6 month Grace Period permitted. The frequency and content of the Rule Book Requalification is the responsibility of the Manager – Training

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Department (by Rule – Appendix B, TTC Policy / Instruction, Procedure B.5.0.9) and not determined by the Management Teams of those employees who require the requalification. APTA recommends efforts be made to establish the warranted frequency of requalification and adhere to that frequency

15. There is no “advanced” training provided for those required to set up work zones or providing protection as watchman (related to section 6 of the TTC Subway / SRT Rule Book 2011). Although for those who have particular technical responsibilities, for example, work on the conductor rail, the training for the role does include more training on setting up worksites. But this is not required, as such, to set up a work site. It was noted by an employee (although 5 years ago) that after only 3 weeks at work with the TTC, he was put in charge of providing a safety for a college placement student in the live track environment. The On-the-Job Training (OJT) that does occur is not documented in any manner. APTA recommends adopting industry On Track Safety standards.
16. According to the TTC Policy / Instruction found in Appendix B of the Subway / SRT Rule Book (2011), Procedure B.5 0.10 (“Procedures”) specifies, “...who successfully completes Rule Book qualification is given a current copy of the Rule Book and a certification card...” However, the practice of issuing certification cards to employees has ceased to exist. A negative implication is that an employee in the track area, operating a train, etc., is not be able to verify the status of qualification, if questioned. Given that supervisors / forepersons / managers may have a personal liability should an injury occur will find it impossible to determine qualification status on site. APTA suggests that the rules be reviewed for consistency of purpose. [NOTE: Such is not the case for trained contractors, who must be with a qualified TTC employee and are issued the certification card and a dated sticker to attach to their hard hat.]
17. A documented OJT program that includes at least three aspects, including (but may not be limited to), a documented checklist of pre-requisites (up-to-date track level certification, appropriate PPE, the currency of any license / certification, etc.), a documented checklist of safety- and mission-critical tasks and a designation of the minimum total number of hours / repetitions deemed necessary to become proficient. Such documentation should be cumulative, with sign-offs as to progress and tracking the number of hours / activities accomplished under the tutelage of the mentor / “student” and finally a statement indicating that the individual’s superior and the individual agree that the requirements have been satisfied and proficiency has been attained. APTA recommends that any OJT associated with safety critical tasks be properly documented.

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18. Track Level training is centered on the Subway / SRT Rule Book and comprises 2 days initial training and 1 day refresher training each year, except for Office staff, which may complete the 1 day refresher by use of an on-line Computer-based Training Program in approximately two hours. Office staff personnel are more vulnerable, not less, unless other mitigating measures are put in place. APTA recommends that industry standards be adopted. [NOTE: The review team was informed that this practice was eliminated by a phone call / text message during the exit conference.]
19. There is a 6-month lead time for training to prepare for rules changes, which seemed too long in the opinion of the Review Team. APTA suggests developing an alternative process for quicker introduction of life-saving rules.
20. Access to the Training Department's Training Database (Pathlore) is perceived by many Managers to not be "user-friendly," as they cannot personally obtain accurate lists of the qualification status of employees within their specific Department. APTA suggests efforts be made to educate Pathlore users on how to access information they need which would effectuate a more-positive attitude toward the accessibility of training records.
21. Although there is a one day rules refresher program established, there was no structured training program presented to the auditors as it applied to the briefing of staff on new rules changes. APTA suggests developing an alternative process for quicker introduction of rule changes.
22. APTA was not made aware of any training need analysis (TNA) being performed associated with safety critical activities or major system changes (e.g. on track safety, new rolling stock and ATC technology). APTA suggests that the TTC conduct a TNA on its safety critical processes to ensure the training programs effectively address staff competency requirements.
23. Training and qualification for rules seemed to be over simplified. The auditors were informed that everyone goes through a 2-day training qualification program. For example, there is no intensive training for people assuming supervisory / protection roles being considered although most of the staff are familiar with FAMES reports that nearly 50% of all track worker fatalities occur to the employee in charge of the safety onsite. APTA recommends that the TTC review training and qualification process to ensure competency for the respective safety critical roles and responsibilities. Although management discussion have been ongoing over the past few months between Operations and Training, it is further suggested that formal liaison be established between Training and the end user departments in the training program development and focus of the initial and requalification training programs.

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24. Each delivery unit has a variation on the procedure development/ risk assessment/ training certification/ assurance cycle. While each area will have different needs APTA suggests that consideration be given to introducing a fully-fledged competence management system in the larger areas such as Rail Maintenance, Train and Station Operations.
25. A recognized vulnerability of the ECE department, as well as many other departments within TTC, lies in the workforce effects anticipated as part of the upcoming directed change to the organization's pension plan. As a result of the change, a wave of employees are expected to retire in from many departments. In some cases new specialized staff positions have been created to actively plan succession, while other departments have developed working groups or committees to assist management. The Materials & Procurement group has asked senior managers to contribute to the creation of an on-the-job training program based on their own expertise, skills, and their respective roles and responsibilities. APTA suggests TTC consider a consolidated plan for assessing vulnerable sections of the organization and evaluating means of addressing the vulnerabilities.

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Element 17: Emergency Planning & Response


Effective Practice

1. The most recent Emergency Response Drill (Subway) occurred on a Sunday morning at the Davisville Station in late August of this year. The activity was a full-scale drill with volunteers “tagged” with various injuries, who occupied only the three (3) northern end of the train. Entrance / Egress was therefore limited to the Emergency Responders through the northern-most exit of the station. This was accomplished to demonstrate what the evacuation of “half” a trainload through half of the platform exits.
2. The TTC Stations Department has made room for two EMS teams (a 3-person team in the morning and a 2-person team in the afternoon / evening) to be stationed in a First Aid Room at the Bloor / Yonge and Union Station to respond to patron / passenger medical emergencies. The EMS Teams work a split / swing shift to cover the morning and evening rush hours.
3. Corporate Safety has developed a Corporate Emergency Plan dated March 13, 2014. A full scale and two tabletop exercises were performed in 2014. APTA acknowledges these emergency preparedness initiatives.
4. Toronto Fire Department training was performed including lifting of vehicles as part of a rescue operation. APTA acknowledges this Corporate Safety sponsored emergency responder training program.
5. Facility evacuation drills are performed annually to include Fire Warden training. APTA acknowledges this workplace safety emergency evacuation initiative.
6. The forepersons within the bus maintenance department are all trained on spill containment and spill kits are placed throughout the facilities. If the spill is greater than a litter transit control is called and a spill containment contractor and a Chief Supervisor respond to the garage.

Action Needed

7. The last live emergency drill conducted for the Streetcar Department was reportedly approximately nine years ago (Spadina Station). APTA recommends regular emergency drills be carried out for each transportation department and that SOPs for conducting drills include after-action reports and post-drill meetings or critiques.

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Element 18: Workplace Safety

Effective Practice

1. As a result of recommendations by the Track Level Safety Committee, new roles have been established for the Person-In-Charge (PIC) and Work Area Coordinator (WAC). SOPs are currently revised to reflect their respective responsibilities in situations where two or more work parties are conducting work in close proximity. This effort is being piloted on the northeast end of the Yellow (#1) Line. The effort is being led by Subway Infrastructure Department (SI), in conjunction with the Track Level Safety Committee, the Subway/SRT Operating Rules Committee and the Information Technology Department.
2. Bus Maintenance has initiated a quarterly Joint Health and Safety Roundtable in partnership with its assigned Safety Consultant and Union co-chairs. Corrective actions, emerging trends and safety alerts / reminders, as well as Departmental and Corporate Safety initiatives are discussed at this open forum. A published newsletter serves as additional outreach to further enforce the topics and alerts discussed.
3. Upon entering the Roncesvalles Streetcar Maintenance Facility, the review team was given a safety briefing related to the tour that was about to begin. Although the briefing was conducted by the safety consultant without any notes, it was appreciated by the Team members.
4. The risks associated with money handling by the collectors and supervisors (robbery and assault) have been mitigated by the fact that those individuals are instructed to give the money to the perpetrators willingly.
5. The TTC “Fitness for Duty” Policy identifies positions to which the Policy applies including, “safety-sensitive,” “specified management” and “designated executive.” Anyone holding one of those identified positions is subject to a “Reasonable Cause” or “Post-Incident” testing. Supervisor / managers have the capability to go to the Human Resources intranet site and click on the “Fitness for Duty” tab as a ready resource to assist with making the correct determination, although usually there is a requirement for two supervisory personnel to collaborate in making the determination. While the process is in place, the implementation is being challenged and in arbitration. An E-learning (HRDFFD-E) program “Fitness for Duty” has been developed for training individuals related to the Commission’s program related to illicit drugs, abuse of alcohol and prescribed medications. [Note: In 2011, the Commission was granted the ability to conduct random drug testing. However, with arbitration continuing this has not been implemented.]

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6. The Human Resources Department provides an Employee & Family Assistance Program (EFAP) in support of helping employees deal with troubling issues, including substance abuse. Under the FFD Policy, an employees may either voluntarily disclose they have a substance abuse problem or one is identified through the discipline process (post incident or reasonable cause). In either case, unannounced testing is conducted for up to two years following treatment. It is referred to as the “After Care” Follow-up Monitoring, the random test schedule is proposed by the Substance Abuse Professional (SAP).
7. Another aspect of the Fitness for Duty program at TTC includes an approach to discipline where an employee loses his/her license for off duty DUI, but is otherwise a good employee. TTC will reinstate to employment status and allow them to bid for an alternate job subject to unannounced testing. The approach is parallel to the FFD policy.
8. One aspect of the Human Resources Department relates to the “Light Duty – Transitional Work Program” (TWP) efforts, which attempt to get employees back to work and remain as productive as they can be; lessening the drain of claims benefits and is administered by the Disability Management Specialist (DMS). The TWP is usually limited to a 3-month maximum, but may be extended to as long as six (6) months on a case-by-case basis.
9. The Signals Department has worked 2.6 million man-hours without a Lost Time injury.
10. The Arc-Flash study is approximately 70% complete and was targeted with the evaluation of the areas / tasks expected to be of the greatest risk. The partially completed study has resulted in the creation of new Procedures (SI’s Procedures & Control section) whose PPE requirements specify the Arc-rated Clothing associated with the number of cal / cm² flash associated with the work to be completed.
11. The newly created SOPs for conducting the specialized work of the SI Department include statements identified as “PRECAUTIONS” and descriptive Safety requirements of the tasks at hand. Additionally, color pictures identifying the steps to take e.g., applying the magnetic negative end of the voltage tester to the negative return rail first and then applying the opposite end to the 3rd rail. Exceptions to the norm are also specified, e.g., areas of the system wherein either rail could be the negative return rail.
12. Review of the November Greenwood Shop Safety Meeting Minutes from each of the three shifts for November 2014 found detailed minutes, with Actions Items assigned to issues raised and dates of completion for closed items. Each was accompanied by Signature Sheets to document attendance.

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13. The new Incident Investigation (Level 1 or 2) Report dated Jan 2014 was provided to the auditors. The form includes a section labeled Part B Root Cause Analysis Management Review. This section documents whether or not a Hazard Identification and Risk Assessment (HIRA) has been performed and if not asks for one to be performed or to provide a rational for not conducting one. This section also asks if the current HIRA should be revised and if this incident could occur in another area, section or department.
14. Every week a member of the Joint Health Safety Committee (JHSC) is stationed in the report area of their worksite to promote safety initiatives, answer safety or related questions or seek input from employees on hazards.
15. In support of employee engagement goals, Heads of Transportation instituted “Back on the Floor” days or so-called “99 Percent” days, in which open forums or meetings are held between department leadership and front-line employees. Each manager must complete ten such days per year. APTA commends the employee engagement efforts.
16. Narrow Casting, the process of placing TV monitors at all work areas is currently being rolled out. The purpose is to provide employees with real time information as well as to reinforce existing safety policies and procedures. APTA commends this.

Action Needed

17. The Streetcar Transportation, Stations, Track, Structures and Rail Cars & Shops Department Managers interviewed were unable to identify the number of injuries incurred departmentally during 2013; nor for Year-to-Date Injury numbers. Hence, they have a difficult time being able to specify whether they have been successful, or not. The concept of trying to drive down those numbers has been a Key Performance Indicator (KPI) of the Commission for many years. The statistics are available for review each month. However, there has been no translation from the identification of injuries and trends to create an Injury Reduction Plan for the Department. APTA recommends the managers and safety consultant evaluate the information available and create and Injury Reduction Plan to drive the number of a particular type of injury in 2015.
18. At the present time, there is no Posttraumatic Stress Disorder (PTSD) Response training for supervisors / TTC staff who have to respond to fatalities / incidents. APTA suggests that such training is provided pro-actively.
19. During the Roncesvalles Streetcar Shop Tour, it was noted that there were no locking devices applied to the two car lifts that were raised and personnel were working underneath the Streetcar.

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The lifts had switch covers broken off and anyone passing by could drop something on the console, causing the lift to descend back to floor level. The foreperson was called over and told the team that special plastic caps were issued to the employees and that they were trained to use them. However, the employees indicated they knew nothing about the Lock Out / Tag Out devices or their application. APTA recommends TTC place additional focus on Occupational and Industrial Safety program adherence.

20. APTA recommends that the items / elements contained in the safety briefing at the Roncesvalles Streetcar Maintenance facility is codified to a checklist, which can be used by any individual who may be conducting such a briefing at the facility.
21. The work of the Track Level Safety Committee should be expedited. The current “consultation” arrangement appears to delay implementation of key safety programs. APTA recommends the governance arrangements for consultation and accountability to decide and direct change in this area should be defined.
22. Some safety consultants have progressed further along with the implementation of corrective action plans and tracking to completion than others. APTA recommends the methodologies applied in implementation of corrective actions plans be made more consistent.
23. Part B of the new Incident Investigation (Level 1 or 2) Report form asks that if the manager filling out the form thinks the incident could occur in other area that the form be sent to those areas. This method of communication leaves too much to the understanding of the managers of which areas would benefit from the information. APTA recommends a formal process be established to communicate both the HIRAs and the root cause agency-wide so that all employees have access to lessons learned.
24. The Incident Investigation (Level 1 or 2) Report is only reviewed by the safety consultants at the manager’s discretion. To improve tracking, the consistency of determining the root cause analysis and managing corrective actions, APTA recommends all Level 1 & 2 Reports be reviewed and signed by the safety consultants.
25. Maintenance departments hold weekly safety meetings exhibiting strong partnership which currently exists between Maintenance department safety consultants, labor unions, and department management. However, it was reported that the corporate safety department does not regularly send a representative to these meetings. The role of the safety consultant is to, among other things, lead corporate safety initiatives, however, this is carried out in different ways across the organization. APTA recommends corporate safety department adopts guidance and SOPs for


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communicating progress of departmental and corporate safety initiatives up to the Chief Safety Officer and laterally amongst departments.

26. The Health, Safety and Environment Department’s intranet site is well-constructed with all of the corporate Safety information housed therein. However, HS&E does not “own” or manage other Intranet Sites, which can lead to difficulty finding “safety-specific” information by having to access a number of different locations to obtain the desired safety information. APTA suggests linking safety documents to enable search and retrieval.
27. It was evident through several interviews with senior leadership that initial corporate safety initiatives were received with varying success, and that consistently, departments struggled to adopt them. Notwithstanding corporate initiatives, each area has developed individual strategies and initiatives, generally carried out at least in part by each respective safety consultant who sets his/her own process and schedule. APTA recommends the “safety consultant” function be guided formally by the corporate safety department and that the existing state of the position be evaluated for conformance.

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Element 19: Contractor Requirements for Safety

Effective Practice

1. A project management philosophy is being adopted to better manage multidisciplinary projects.
2. Six positions were created to form a project management office within the Subway Infrastructure department. A corporate project management office is also being evaluated.
3. The Engineering Construction & Expansion (ECE) department is managing over a hundred projects valued at over 26 billion dollars, \$340 million in the 2014 budget. Their processes for safety certification, configuration management, document control, purchasing and materials management, job specific safety plans are models for the rest of the agency as well as the transit industry. They are cohesive and project oriented with great inter-project communication. This group could efficiently and effectively manage configuration management for the entire agency or at least provide training and clarity to those departments responsible for configuration management. TTC could assess this department's value as a model for the mentioned processes and encourage them to train or mentor others within the agency.
4. ECE has developed a manager- health & safety position to manage departmental safety processes. The role mirrors in many respects that of the imbedded safety consultant.
5. ECE has developed a mandate, "to develop, improve and expand the network (and to) deliver quality projects, safely, on time and on budget." APTA commends the policy of a commitment to safety.
6. The engineering department is tasked with management of TTC Design Standards to be applied to capital projects/ renovations throughout the system. The department also leads technical studies, specialized engineering efforts, and support projects as needed by other TTC groups.
7. In 2014-15, the department has secured the assistance of peer reviewers on two distinct peer reviews, related to current engineering & construction projects.
8. ECE has implemented a new Certificate of Recognition (COR) process by which contractors (effective summer 2014) must obtain third-party authorization before being considered eligible to bid on construction projects for the TTC. It is a program adapted from existing practices in Alberta and British Columbia. The program mandates safety certification of contractor personnel as a pre-requisite for bidding on projects.

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9. Construction site safety observations are conducted by construction safety officers, in partnership with site managers, and (for most large projects) a site person whose responsibilities include management of on-site safety. All site safety observations are documented using a standard form.

Action Needed

10. Fluid tank management is a risk concern and is periodically audited by Corporate Safety to ensure proper mitigation measures are in place. However, there is no tank management program or programmatic inspection program in place to monitor this exposure risk. APTA recommends that the TTC evaluate this risk and exposure associated with its fluid tank management program and initiate additional program measures as required to achieve an acceptable risk level.
11. The maintenance department has created a new sign-in process for contractors where an explanation of the need for a safety awareness is provided prior to the contractors going to the worksite. A full safety briefing is conducted and documented at the job site. An additional job safety briefing is conducted at the individuals work site before work is allowed to start, however this job site safety briefing is not documented nor signed for by the workers. APTA recommends that both the safety briefing and the job site safety briefing be documented and signed by each employee.
12. In conjunction with the efforts led by the Risk Assessment group, the ECE department is developing and adopting a Quality Management System (QMS) approach. The QMS is a process that is insular and unique to the ECE department. Given the organizational implications of instituting a large-scale management system, approximately during the same time period as the adoption of a Safety Health & Environment Management System (led by the corporate safety department), and the high likelihood that certain functions within the organization may have roles and responsibilities in both systems, a concerted effort—from the top down and “bottom up” should be made to actively plan the co-implementation of both systems. Roles and responsibilities, whether shared by both systems or distinct, in all areas must be clearly defined, with buy-in from the stakeholders and departments to be affected. APTA suggests strategic planning efforts be initiated within TTC. The QMC mentioned above and the RAMS initiative in maintenance it is obvious that departments are taking on responsibility themselves.

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Element 20: Procurement & Stores

Effective Practice

1. Requests for part configuration changes or new parts are routed through the technical services group within a department. The part is sent to the internal quality control lab where it undergoes rigorous testing of conformance to the technical standards. To enable precise measurements of the part, a Coordinate Measuring Machine (CMM) has been acquired. The tool creates a precise CAD drawing of the item, with which the technical team evaluates conformance to the specification or standard. APTA commends this practice, and considers this to be an **Industry Leading Effective Practice**.
2. Site-specific health and safety plans are submitted by contractors as part of the review and selection process. The contract, if tendered, includes non-negotiable safety elements. Upon commencement of work, TTC trained and certified construction safety officers are responsible for the site safety observations, providing site oversight for safety. The contractor is required to have a full-time safety representative on the site. The evaluation of the contract delivered (upon completion) includes safety elements. APTA commends these practices to ensure contractor safety SOPs and practices conform to TTC requirements before work on a project commences and during project delivery.
3. The design review process commences for any design that affects territory within 60 meters of TTC infrastructure.
4. The department has implemented an engineer-in-training program (3 positions currently) through which students at local universities train to obtain their Professional Engineer (P.E.) license while receiving on-the-job training on TTC projects.
5. Through a variety of efforts and management commitment, the materials & procurement group—a 24/7 operation—has been able to accomplish a parts availability ratio of 99% throughout the Commission. This is a commendable achievement and APTA recognizes the department for its efforts.
6. Safety messages from department management to employees includes monthly safety videos which alert the viewer to known hazards or emerging trends. The videos are produced in-house and are typically focused on incidents or hazards specific to the department, to which the employee can relate. APTA commends the practice to deliver targeted, timely alerts and bulletins to shop and warehouse employees regarding workplace safety. This effort is an excellent

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example of a safety culture; management as the cheerleader providing information, examples, inspiration and incentives for safety awareness and performance.

7. QA/QC checks are conducted in the Materials & Procurement department, including; seatbelt compliance by forklift operators, eyes on task, and other observations. The tool used to manage and track such observations is “SafeStart”, a software program that at one time was adopted by multiple departments but renewed recently by this department only. As a result of the commitment by management and at least in part attributed to the ongoing QA/QC checks captured in the SafeStart program, a proportionately high number of near-miss incidents and hazards are being reported. Despite this high number, the department has logged one (1) reported occupational injury in 2014, which seems to indicate the high number of reported near-misses and hazards is not indicative of a higher-than-average concentration of hazards (compared to other areas) nor a lower-than-average safety performance amongst employees. APTA commends the excellent safety performance and diligence demonstrated by Materials & Procurement management to foster a culture of safety at all locations.
8. For new or replacement hazardous material purchase requests, the request must be approved by the corporate safety department. Periodic purchase reports are sent to the line departments for the purpose of auditing materials in use in their respective areas against the materials purchased through Materials & Procurement.

Action Needed

9. As noted above, the Materials & Procurement department has initiated a number of excellent management practices which the entire organization could put to good use in their respective areas. Another excellent example that M&P championed was found in the succession planning practice. Senior managers were asked to help create customized, job-specific e-learning modules intended to train and re-train fellow employees, based on their own roles and responsibilities, lessons learned, and experience gained over the years. The modules will be used long after the senior managers involved retire from the TTC. While APTA commends all of these innovative programs, they all could stand to have increased focus brought to bear on safety critical functions. This would build the expectation that safety is an integral part of the way business is done. APTA suggests incorporating safety and security functions into the succession planning effort.

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Element 21: Passenger & Public Safety

Effective Practice

1. The Gatekeeper Program has been further developed to mitigate the risk of suicides at station platforms. Since implementation the program has been expanded to include trained detection of and response to high-risk behaviors. SOPs for train operators include an “unsafe platform procedure” which requires them to decrease station approach speed to 10 k/h. Additionally, information related to “CrisisLink” (a 24 x 7 x 365) hotline center and a phone number for distressed veterans are posted throughout the TTC.
2. Gatekeeper training is provided to supervisors and employees regarding suspicious suicidal behaviors and “intervention techniques” have helped to lower the number of suicides / suicide attempts. Another aspect includes signage indicating contact numbers in case one is contemplating doing harm to their self.
3. Presently, there are approximately fifty (50) Projects associated with the Stations Department; the largest is related to the migration to the electronic smart card (PRESTO) that has been installed(as of February 2013) on GOTransit system and all 905 Transit Agencies around Toronto and in 14 TTC subway stations. As of that date, there were 447 thousand cards in use with 58 million fares collected. Efforts continue with a goal to have installation available by the PanAm / ParaPanAm games in 2015.
4. The TTC’s Station Management Team has been conducting “Meet the Manager” sessions (each an hour – hour and a half scheduled duration) at various stations throughout the system five times per quarter. The meeting schedule is produced at the start of the year and meetings are conducted during the morning, afternoon and early evening. Additionally, Annual Town Hall Meetings have been conducted. A Daily Customer Service Report is generated on the TTC website demonstrating the day’s punctuality, reliability and Elevator / Escalator access; each another attempt to communicate with the Commission’s stakeholders.
5. A review of the undated “Subway Station Inspection” form revealed that all safety mechanisms that should be checked daily are present on the form and warrant evaluation.
6. Passenger safety initiatives were noted in the TTC Stations, including “Do Not Rush,” “Designated Waiting Area” and “Stand Behind the Yellow Line” were reported to be the result of the TTC Marketing Department.

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7. As a part of the engagement initiative, the Customer Communications Department has begun its quarterly “Rewards & Recognition Program for employees. The Program is accepting nominations for Customer Service, Leadership, Teamwork and Safety Awards. Additionally, nominations associated with the Innovation and Creativity Program (formally the Employee Suggestion Plan), are being initiated in January and a Customer Development Area is being initiated.
8. The HR department also maintains a “Medical Surveillance” program relative to certain work-related exposures.
9. The Streetcar Transportation Department has established a “Stop, Check, Go” process for Streetcar Operators to follow at every facing switch. The intent is to establish a mechanism that brings specific details to a higher level of consciousness as a part of the operation. Each Streetcar Operator is to stop short of a facing switch-point; point at the “point’s” position to confirm the switch is “tight” and in the proper position for the vehicle’s intended movement. Although the review team only noted five (5) opportunities, each operator conducted the stop at a switch and then proceeded. In the two opportunities available to note the finger-pointing activity, both conformed.
10. The Subway Transportation Department has established a finger-pointing activity as a practice designed to prevent the opening of the doors of a train under three precarious conditions, namely, when the train is berthed past the end of a station platform, berthed short of the proper position and when opening the non-platform side doors. A Green circle or green triangle (depending upon which fleet is being operated) is visible at the correct position on the platform wall to indicate a six-car train is properly berthed when the guard’s window is opposite the circle / triangle. The guard is to point at the green circle / triangle prior to opening the doors of the train. Of eleven guards observed, seven were readily observed to be following the process.
11. The Province recently passed legislation regarding priority seating throughout the system. If a non-disabled passenger does not vacate the priority seat they are subject to a fine. The operator is instructed to call into control and a chief supervisor or a transit police officer will be dispatched to address the issue. To draw further attention to the change the priority seat color was changed from red to blue.
12. Fifty three service delays have occurred so far this year as a result of the Passenger Assist Alarms being used incorrectly. As a result the TTC is adding the international signs for police and fire to the instructions on the alarms so intended use of the alarms will be even more obvious. APTA acknowledges this.

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13. A near-miss reporting form was developed and corresponding training was delivered to line levels on proper reporting of near-misses in the system. The non-punitive nature of the SOP was stressed to employees. The reporting process is tied to ongoing department-led safety data analysis and ultimately reported back to the employees in the form of safety alerts.

Action Needed


14. Presently, there is no target / KPI related to passenger / patron safety in a TTC Station. At least one World Class transit agency requires Station Masters and staff to have targets and develop action plans designed to limit of the number of customer injuries that occur in “their” stations. APTA recommends development of customer safety KPIs. Further, APTA recommends that Corporate Safety assess its current capabilities to support passenger injury / accident analysis and mitigation measures and develop recommendations to improve efficiencies.

15. The Group Station Manager (Landlord) concept is being developed to address existing issues related to safety responsibility, e.g., fire safety, staff performance and competence. However, at the present time, there are an insufficient number of supervisors and the collectors are not designated to a specific supervisor. APTA suggests, with the projected number of supervisors expanding from the present 56 to approximately 300, the Stations Department can establish a dedicated Landlord – Supervisor – Collector relationship, that “teams” will become the reality, allowing for the establishment of safety and security “promotion” programs / campaigns for stakeholders served by the “Team.”

16. TTC Corporate Safety has established sound programs focused on workplace safety. There is a need to increase program development and departmental support in areas of customer and public safety on Subway, Streetcar and Bus operations. APTA recommends that Corporate Safety assess its safety promotion efforts in the areas of passenger and public safety and work with the operating departments to develop passenger and public program initiatives based on risk exposure.

17. To locate safety and security information on the TTC web page viewers must go to “Riding the TTC”, then to the “Frequently asked questions” section and click on the last item on the list “Safety”. From there a page opens with a section titled “How do I learn more about TTC safety”. The reader can then open the next page which provides some detailed information. To further demonstrate TTC’s commitment to the safety and security of its customers APTA suggests the home page provide a direct link to Safety and Security and that the information provided there be thorough and complete.

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Element 22: Rail Corridor Operational Safety

Effective Practice


1. During the walking inspections of the Subway Track and Tunnels that take place on a daily basis no one is a “Lone Worker,” as the requirement is that at least two-person teams will conduct such inspections. [Depending upon the section of track and the nature of the inspection, three persons may be in the assigned Crew.] Regardless of the size of the Crew (2 or 3), one person is the one designated to have sole responsibility to watch for train movement and hand signals...” (Rule 3.5 of the 2011 Subway / SRT Rule Book).


Action Needed


2. Those establishing a worksite in revenue hours are required to call in and call back to Traffic Control to confirm they are entering and clear of the track. (The names / number of employees in the crew is not required to be transmitted and recorded by Traffic Control.) In non-revenue Hours the “call in” / “call out” is not required. APTA recommends use of industry standards for establishing work zone safety.
3. There is no ongoing “competence management” of track safety as such, just refresher training. The Corporate Quality team does undertake checks / audits, but there are no line management competence assessments. APTA recommends that Line Management and their superiors conduct quality checks of the track safety program.
4. As the gauge of the TTC is wider than the standard railroad gauge, a third party contractor has not been able to conduct ultrasonic testing of the TTC rails. Ultrasonic testing is performed annually on foot by pushing a “Push-bike” device. In reality, it takes 18 months to complete the testing cycle. It is important to note that rail approaching bridges is ultrasonically tested on a quarterly basis, however, on the whole, the practices in place do not satisfy minimum industry standards. Technology can now provide for standard-gauge track operations to be tested for track geometry and ultrasonic testing by the same vehicle while travelling at more than 50 k / h. APTA suggests that weakness in testing methodology be made a part of the Corporate Risk Registry and evaluated using the new Enterprise Risk Management system.


Industry Leading Effective Practices


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| Pillar 2 Element 7 | An Assault Prevention Team has been established. Among other activities, the Team is currently tasked with assessing the effectiveness of the presently non-mandatory use of the upper and lower operator shields. The shield use (upper/lower) has been added to the Incident Investigation Form used by Supervisors as a way to capture data for hazard analysis. Furthermore, a new TTC policy was recently enacted, which no longer requires operators to ask that customers produce ID in conjunction with certain passes. The Fare Challenge Policy has been revised such that the operator is asked to first observe, then (if necessary), engage and finally (if necessary), report. These policy decisions came as a direct result of the Assault Prevention Team’s findings that a vast majority of assaults were fare-driven. APTA commends these efforts to mitigate the risk of operator assaults throughout the system and considers the multiple department Assault Prevention Team concept to be an Industry Leading Effective Practice . |
| Pillar 2 Element 8 | The Chief Supervisor position is considered to be “the best trained front-line employee in the company.” He/she is cross-trained in the transit control center operations, dispatch, rules, procedures, incident command and accident/incident investigation protocols for all three modes by Toronto Police Services. APTA commends this Industry Leading Effective Practice . |
| Pillar 3 Element 12 | Exceeding the Ministry of Transportation of Ontario requirement to perform three standard brake checks as part of the pre-trip or “circle” check, TTC has adopted a requirement for each operator to conduct six distinct checks related to air pressure and emergency brake functions. APTA considers this to be an Industry Leading Effective Practice . |
| Pillar 3 Element 12 | The Ride Check program to evaluate bus operator performance includes a clandestine/plain-clothes component whereby supervisors from other divisions are tasked with performing the ride check of the bus operator. To avoid detection by the operator, the practice includes the technique of using a standard, public metro fare card (as opposed to an employee transit pass) upon boarding. APTA commends the thoroughness of the practice, and the efforts to accurately gauge service delivery and safety throughout the system and considers it to be an Industry Leading Effective Practice . |
| Pillar 4 Element 16 | Training room of mock-up subway environment and equipment is excellent; it enables workers to have hands on experience in various work zone protection arrangements and practicing communication protocols. As a follow up action from the Round Table, the initiative was completed timely and demonstrated prompt response to worker demand. It includes the ability to simulate calls to Traffic Control, set out “blue lights” for Revenue traffic Hours. It includes a simulation of what the driver will see when blue lights are set out. This is considered to be an Industry Leading Effective Practice . |
| Pillar 4 Element 20 | Requests for part configuration changes or new parts are routed through the technical services group within a department. The part is sent to the internal quality control lab where it undergoes rigorous testing of conformance to the technical standards. To enable precise measurements of the part, a Coordinate Measuring Machine (CMM) has been acquired. The tool creates a precise CAD drawing of the item, with which the technical team evaluates conformance to the specification or standard. APTA commends this practice, and considers this to be an Industry Leading Effective Practice . |


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|  | | 1.0 System Safety Program Plan Development & Communication 2.0 Policy Statement & Authority 3.0 System Safety Program Plan Purpose & Scope | | PILLAR 1: SAFETY POLICY & PROCEDURES | | Checklist |
| ITEM | ITEM DESCRIPTION | S | M | REMARKS | | |
| 1.1 | System Safety Program Plan developed <ul style="list-style-type: none"> Approved and signed by CEO/GM/Board Represents updates to the Strategic Safety Plan and current Mission, Vision, Values | 1 | C | | | |
| 1.2 | System Safety Program Plan reviewed and updated | 1 | C | | | |
| 1.3 | System Safety Program Plan communicated to entire organization | 2 | B | S.F. Page 4, Items #6, 7 | | |
| 2.1 | Safety Policy clearly stated, disseminated, and applied <ul style="list-style-type: none"> Reviewed periodically Incorporated in training Communicated throughout the organization Safety department the primary plan author | 1 | C | | | |
| 2.2 | Authority outlined for the development of the System Safety Program Plan and Department Safety Plans <ul style="list-style-type: none"> Supported by legal, financial, political and regulatory resources to meet plan objectives Meets regulatory requirements | 1 | C | | | |
| 2.3 | Authority for implementing Safety Plan defined <ul style="list-style-type: none"> Interface between Agency and contract services defined Any external Operating/Maintenance Agreements or MOUs establish safety and security roles | 1 | C | | | |
| 3.1 | SSPP purpose: <ul style="list-style-type: none"> Identifies organizational safety philosophy Meets regulatory requirements Meets industry standards/ audit provisions Employee involvement at all levels with safety plan development and implementation Initiates a risk based systems approach to safety management and safety engineering Working towards a positive safety culture | 1 | B | Page 5 Items #5, Page 6 Items # 6 | | |
| 3.2 | SSPP scope establishes: <ul style="list-style-type: none"> Identifies safety policies needed in the organization Framework for implementation of safety policies and related goals and objectives A commitment to continuous improvement in safety Implementing a process, achieving a positive safety culture and ongoing assessment of effectiveness of safety culture | 2 | B | Page 5 Item #4 | | |
| 3.3 | Relationship of system safety process to operational risk defined <ul style="list-style-type: none"> Departments aware of responsibilities for the implementation of SSPP Safety definitions included and/or referenced where applicable Plan disseminated to all departments | 1 | B | | | |


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|  4.0 Goals 5.0 Identifiable & Obtainable Objectives 6.0 Strategic Planning | | PILLAR 1: SAFETY POLICY & PROCEDURES | | Checklist | |
| ITEM | ITEM DESCRIPTION | S | M | REMARKS | |
| 4.1 | Safety Program goals and objectives are clearly stated <ul style="list-style-type: none"> • Long-term, with broad and continued relevance • Meaningful with specific/desired results identified • Achievable • Integrated with corporate mission vision and values • Are properly specific and endorsed by management | 2 | B | Page 7 Items #3, 4 | |
| 4.2 | Role of each department/division identified in the attainment and support of overall goals and objectives | 1 | B | | |
| 5.1 | Objectives of Plan are clearly stated and include performance measurements <ul style="list-style-type: none"> • Quantifiable, using proper scales or values as KPIs • Performance appraisal systems evaluate safety performance • Policies disseminated to all employees | 1 | C | | |
| 5.2 | Roles, responsibilities and authorities are defined <ul style="list-style-type: none"> • Implementation of internal and external safety communications/feedback on effectiveness and implementation of necessary changes • Status reports to top management as part of regular meetings | 2 | B | Page 8 Items #5, 6 | |
| 6.1 | Policies/procedures for implementation of Safety Plan objectives and accountability <ul style="list-style-type: none"> • Updates established and tracked • Policies disseminated to all employees | 1 | C | | |
| 6.2 | Roles, responsibilities and authorities are defined <ul style="list-style-type: none"> • Key positions at senior management level • Committee membership • Independent authority in reporting to GM/CEO • Relationship of transit system to local/outside jurisdictions | 1 | C | | |
| 6.3 | Documented strategic planning/review process for updating, correcting and modifying System Safety Program Plan based on feedback on effectiveness of processes | 2 | B | Page 10 Items #3, 4 | |


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|  | | 7.0 Hazard Management Program | | PILLAR 2: SAFETY RISK MANAGEMENT | |
| | | | | Checklist | |
| ITEM | ITEM DESCRIPTION | S | M | REMARKS | |
| 7.1 | <p>Hazard Management SOP/documented process in place:</p> <ul style="list-style-type: none"> Hazard identification / analysis / resolution methods established Specialized areas of Hazard Management practiced (fire, security, collision, JHA/JSA, PPE, health, environmental etc) Mitigation process (Hazard Precedence) applied throughout system lifecycle Scheduled program reviews conducted to determine effectiveness of procedures and to detect changes in frequency or severity ratios. Coordination with all safety processes established including inspections, audits, customer reports, post-accident investigations, loss control reports, etc. Method established to analyze and perform trend analysis of information gathered (lessons learned, KPIs, regional crime data, state of good repair, etc) Training provided on hazard management Human factors are included in analysis of hazards to identify safe behaviors and potential areas for human error occurrences Training provided on hazard identification, analysis, and controls | 2 | C | Page 12 Items #8, 10 | |
| 7.2 | <p>Procedures on Corrective Action Plans developed and documented:</p> <ul style="list-style-type: none"> Method for tracking "open" items to closure Open items are ranked, prioritized, and scheduled for actions toward resolution Person assigned responsibility for mitigations and performance reviewed Completion is formally accepted Historical files on "closed" hazards maintained Routine evaluations performed to determine status of hazards | 1 | C | | |
| 7.3 | <p>Applying Risk Based Analysis solutions to engineering, management process, and human error prevention:</p> <ul style="list-style-type: none"> Risk based processes are used effectively Re-evaluation performed (new equipment, new procedures, post accident, etc.) Risk analysis embedded in the safety culture to target high consequence events Controls are appropriate for hazards and established with measurable safety margins (alert when drifting toward failure) | 1 | D | Industry Leading Effective Practice – Pg. 11, Item #4 | |
| 7.4 | <p>Hazard Identification</p> <ul style="list-style-type: none"> Process established to identify, report, and document hazards, Method established to perform trend analysis of information gathered | 1 | C | | |


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|  | 7.0 Hazard Management Program (continued) | | PILLAR 2: SAFETY RISK MANAGEMENT | | Checklist |
| ITEM | ITEM DESCRIPTION | S | M | REMARKS | |
| 7.5 | Hazard Evaluation and Categorization <ul style="list-style-type: none"> • Formal / Informal analysis methods established and documented • Hazard severity and probability assessed through a predetermined matrix • Risk mitigation process defined and applied throughout the system lifecycle | 1 | C | | |
| 7.6 | Hazard Tracking and Resolution <ul style="list-style-type: none"> • Resolution methods documented and reviewed • Use of consolidated hazard log • Routine evaluations performed to determine the status of documented hazards • Historical files on "closed" hazards maintained | 2 | B | Page 12 Item #9 | |
| 7.7 | Tracking Open Items List <ul style="list-style-type: none"> • Method established to track open items to closure do not allow duplicates or loss of data • Open items are ranked, prioritized, and scheduled for actions leading to resolution • Responsibility assigned for mitigation actions • Status reviewed to ensure appropriate closure and schedule adherence • Completion is formally accepted with or without residual risk | 1 | B | | |


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|  | 8.0 Accident/Incident Reporting & Investigation | PILLAR 2: SAFETY RISK MANAGEMENT | | Checklist | |
| ITEM | ITEM DESCRIPTION | S | M | REMARKS | |
| 8.1 | Documented policy/process in place for investigating accidents <ul style="list-style-type: none"> • Accident investigation criteria established for employees, contractors and passengers • Occupational and Operational accidents are covered • Significant Event (Near-miss) policy documented • Post accident critique conducted • Post accident drug and alcohol testing procedures applied • Field reports prepared and verified with proper sign-off • Supervisor report on cause and corrective action reviewed by management • Hazard analysis performed based on accident cause(s) | 2 | B | Page 13 Item #4 | |
| 8.2 | Training provided on basic accident investigation procedures / techniques <ul style="list-style-type: none"> • General training provided to all employees on occupational accidents • Specialized training provided for operational accidents • Advanced training provided for designated investigators Retraining and refresher training offered | 2 | C | Industry Leading Effective Practice – Pg. 13, Item #3 Page 13 Item #5 | |
| 8.3 | Internal/External notification procedures established <ul style="list-style-type: none"> • Documented with SOPs/PIs • Protocol clearly defined for reporting to government agencies and internally | 1 | C | | |


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|  | 9.0 Safety Data Acquisition & Analysis 10.0 Configuration Management | | PILLAR 3: SAFETY ASSURANCE | | Checklist |
| ITEM | ITEM DESCRIPTION | S | M | REMARKS | |
| 9.1 | Responsibilities defined for providing, receiving, processing, analyzing, report and disseminate safety data. <ul style="list-style-type: none"> Employee / contractor / customer accidents Vehicle / Rail accidents Regulatory / safety hazard reports generated and maintained internally and externally | 1 | C | Page 15 Item 7 | |
| 9.2 | Safety data collection and reporting (tracking / trend analysis and data interpretation). <ul style="list-style-type: none"> Corrective actions documented Trend analysis performed Process in place for evaluating effectiveness Information Systems / Technology support functions defined | 2 | B | Page 14 Items #3, 4, 5, Page 15 Items 8, 9 | |
| 9.3 | Key Performance Indicators for Safety and Security identified: <ul style="list-style-type: none"> Safety performance targets and metrics are taken and disseminated appropriately Units of measure appropriate (leading vs. lagging) Measurement tied to departmental objectives and performance appraisal system Corrective action assessed for effectiveness Top management using data to lead organization & in decision making | 2 | D | Item #6 | |
| 9.4 | Risk Management Plans / Procedures adopted for Loss Prevention and Control: <ul style="list-style-type: none"> Business Continuity of Operations Plan Disaster Recovery Plan Integration and collaboration with other departments to manage organizational risk Means of mitigating operational risk to as low as reasonably practicable | 3 | A | | |
| 10.1 | Change management process is documented and utilized. <ul style="list-style-type: none"> Identifies all stakeholders, including safety, in decisions affecting safety critical elements. Tied to the hazard management process | 2 | B | Page 16 Item #4, Page 18 Item #11 | |
| 10.2 | Change Control Process <ul style="list-style-type: none"> Change review and control procedure established Authority for making configuration changes and process to incorporate changes defined Schedule for implementation of changes Incorporated into Document Control | 2 | B | Page 16 Item #4 (see above) | |


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|  | | 10.0 Configuration Management (continued) 11.0 Safety & Security Certification | | PILLAR 3: SAFETY ASSURANCE Checklist | |
| ITEM | ITEM DESCRIPTION | S | M | REMARKS | |
| 10.3 | System Modification Process <ul style="list-style-type: none"> • Policy documents scope and responsibilities • Control authority established for procedures, practices, facility, equipment, systems, manuals, rules, etc. • Procedures for making configuration changes to the components, processes and practices found on the safety critical items list • Demonstration or pilot projects managed • Acceptance and sign-off / approval includes safety/security • Incorporated into Document Control | 2 | B | Page 19 Items #8, 12, 15 | |
| 10.4 | Quality Assurance / Quality Control Process <ul style="list-style-type: none"> • Quality Policy documented • Authority and responsibility for QA / QC defined • Quality management standard adopted (ISO or other) • Inter-department coordination identified • Process controls established • Training and qualifications of staff documented • Inspection, test, and non-conformance procedures followed | 1 | B | | |
| 10.5 | Document Control Program <ul style="list-style-type: none"> • Document life cycle management policy/procedure • List established of safety critical documents to be controlled • Established procedure for review, approval, and issuance of new and revised controlled documents • Identification of changes and revisions (change page) • Identification and control of external documents, e.g. vendor supplied documents, technical change bulletins. • Prevent unintended use of obsolete documents • Access controls for viewing, copy, distribution, removal • Digital content management • Document retention / destruction procedures | 2 | B | Page 16 Items #5, Page 17 Items 6, 7, Page 18 Items 9, 10, Page 19 Items 13, 14 | |
| 11.1 | Safety & Security Cert. Plan documented and reviewed by management <ul style="list-style-type: none"> • Safety & security committees (SSRC, FLSSC, etc.) established for all new starts and extensions • Certifiable elements identified (SCIL) • Design and construction conformance • Test and verification plan • Hazard tracking in place • Formal certification steps documented with sign-off • Open items reviewed | 2 | C | Page 20 Items #2 (Also see below) | |
| 11.2 | Safety & Security Cert. applied to new starts, extensions, and major system modifications | 2 | C | Page 20 Items #2, (Also see above) | |


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|  | 12.0 Safety Assessment | | PILLAR 3: SAFETY ASSURANCE | | Checklist |
| ITEM | ITEM DESCRIPTION | S | M | REMARKS | |
| 12.1 | Safety audit program established and documented to ensure all organizational elements, equipment, procedures, and functions are performing as intended from a system safety perspective <ul style="list-style-type: none"> • Safety programs developed/implemented • Audit schedules established/followed • Checklists prepared and distributed to operating units • Effective Practices identified • Program deficiencies/potential hazards and weaknesses identified • Corrective actions identified / tracked for closure • Improvement recommendations made to system safety program | 2 | D | Industry Leading Effective Practice – Pg. 21, Items #2, 3 Page 22 Items #12, 13 | |
| 12.2 | Key elements of the organization are identified by top management for achievement, recognition, or awards. <ul style="list-style-type: none"> • Internal programs • Industry recognition | 1 | A | | |
| 12.3 | Management Review Process <ul style="list-style-type: none"> • Top level management / corporate commitment and structure to oversee inputs and outputs • Formal documented review process • Assess internal and external audit findings / key performance indicators to organizational goals • Action plans used to track and verify status of improvements identified in assessment reports • Follow-up meetings held between management staff to discuss individual audit findings • Review organizational philosophy (mission, vision, values) and adjust strategic plan for safety improvement | 2 | A | Page 23 Items #14, 15 | |
| 12.4 | Document control established for internal audit program, including recommendations and follow-up actions | 2 | A | Refer to Configuration Management (Element #10) | |


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|  | 13.0 Infrastructure Maintenance | | PILLAR 4: SAFETY PROMOTION | | Checklist |
| ITEM | ITEM DESCRIPTION | S | M | REMARKS | |
| 13.1 | Inspections conducted on a regular basis <ul style="list-style-type: none"> • Checklist of items to document inspection • Tools and equipment included in inspection process • Frequency of inspections detailed | 1 | C | | |
| 13.2 | Inspections tracked, including work orders and findings/recommendations (quality assurance) <ul style="list-style-type: none"> • Supervisor spots checks of inspections (quality control) • Tracking performed on repairs with trends / follow-up established | 1 | C | | |
| 13.3 | Systems Maintenance Plan <ul style="list-style-type: none"> • State of good repair identified • Deferred Maintenance policy documented • Formalized process for controlling workarounds • Shift turn-over process documents safety status • Calibration program • Other system processes defined | 1 | C | | |
| 13.4 | SOPs, PIs and/or Directives developed for employee tasks <ul style="list-style-type: none"> • Integrated with JHA/JSA • Based on industry standards • Job safety briefings conducted | 1 | C | | |
| 13.5 | Formalized training for employee tasks documented. <ul style="list-style-type: none"> • Licenses / certifications obtained • System in place to track employee training • Vendor training documentation reviewed / approved | 1 | C | | |
| 13.6 | Safety meetings conducted/audited <ul style="list-style-type: none"> • Attendance sheets maintained / frequency noted • Minutes / summaries prepared • Status reports sent to senior management | 1 | C | | |
| 13.7 | Procurement and System Maintenance inspections (Scheduled QA/warranty inspections / surveillance): <ul style="list-style-type: none"> • In-house / contracted overhauls, maintenance, and repairs • Reports generated / document control established, including sign-off authority • Corrective actions documented and tracked to closure • Guidelines for OEM/after-market parts & equipment • Protocols for procurement, warranty, and system maintenance | 1 | C | | |
| 13.8 | SOPs/PIs or directives for testing repaired equipment (quality assurance): <ul style="list-style-type: none"> • System established to identify items that need repair (safety critical) • Supervisor spot checks of repaired items • References made to supporting documentation | 1 | C | | |


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|  | | 13.0 Infrastructure Maintenance (continued) 14.0 Vehicle Maintenance & Repair | | PILLAR 4: SAFETY PROMOTION | |
| | | | | Checklist | |
| ITEM | ITEM DESCRIPTION | S | M | REMARKS | |
| 13.9 | Change control / system modification process utilized <ul style="list-style-type: none"> Safety certification Quality Assurance / Quality Control Configuration management | 2 | B | Page 24 Item #7 | |
| 13.10 | Contractors used for repairs: <ul style="list-style-type: none"> SOPs / training provided on railroad safety critical procedures Method in place to monitor contractor work Inspection/acceptance program documented (QA) | 1 | C | | |
| 13.11 | Asset Management System in place: <ul style="list-style-type: none"> Infrastructure assets with safety critical function identified in plan Frequency of determining service condition Method of determining acceptable ranges of service condition that support levels of state of good repair | 2 | C | Page 24 Item #6 | |
| 14.1 | Maintenance Program established and documented <ul style="list-style-type: none"> Safety, Engineering & Procurement coordination for replacement/substitute parts Life-cycle/overhaul/PM/Fleet Management program plans in place | 1 | C | | |
| 14.2 | Formalized documentation established for. <ul style="list-style-type: none"> Work order system Key performance indicators Supervisor spot checks Deferred Maintenance program Testing and verification program on safety critical procedures / components Formal work around procedures Shift turn-over process documents safety status Industry standards Reports prepared; recommendations tracked | 2 | C | Page 26 Items #11 | |
| 14.3 | Checklist and schedule for conducting inspections of: <ul style="list-style-type: none"> Vehicles (revenue / non-revenue) Tools & equipment (forklifts, safety equipment) Plant equipment (in ground lifts / fire suppression systems) | 1 | C | | |
| 14.4 | Calibration program in place <ul style="list-style-type: none"> Precision instruments identified within program Tools and instruments tagged/marked Calibration tests documented Expiration date tracking process used Formal procedure to remove/destroy out of spec tools | 2 | C | Page 26 Item #12 | |
| 14.5 | Formalized training program / policy for employee tasks <ul style="list-style-type: none"> Licenses / certifications System to track employee training Notification established for training / re-training needs On-the-Job training (OJT) documented Evaluations conducted for students and instructors | 1 | C | | |


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|  | 14.0 Vehicle Maintenance & Repair (continued) | PILLAR 4: SAFETY PROMOTION | | Checklist | |
| ITEM | ITEM DESCRIPTION | S | M | REMARKS | |
| 14.6 | Written work instructions or verbal task assignments include job safety briefing <ul style="list-style-type: none"> JSA / JHA conducted for routine assignments Employees assigned are trained and competent | 1 | C | | |
| 14.7 | Procurement and System Maintenance Inspections (Scheduled QA/warranty inspections / surveillance): <ul style="list-style-type: none"> In-house / contracted overhauls, maintenance, and repairs Reports generated / document control established, including sign-off authority Corrective actions documented and tracked to closure Guidelines for OEM/after-market parts & equipment Protocols for procurement, warranty, and system maintenance | 1 | C | | |
| 14.8 | SOPs/PIs or directives for testing repaired equipment (quality assurance) <ul style="list-style-type: none"> System established to identify items that need repair (safety critical) Supervisor spot checks of repaired items References made to supporting documentation | 1 | C | | |
| 14.9 | System modification review and approval process documented on new or modified/updated equipment <ul style="list-style-type: none"> Training for maintenance staff Maintenance manuals provided Safety critical documents/elements identified Exception monitoring in place Approval / sign-off obtained Engineering coordination established | 1 | B | | |
| 14.10 | Change control / documentation process utilized <ul style="list-style-type: none"> Safety certification Quality Assurance / Quality Control Configuration management | 2 | B | | |
| 14.11 | Safety meetings conducted <ul style="list-style-type: none"> Attendance sheets maintained / frequency noted Minutes / summaries prepared Status reports sent to senior management | 1 | C | | |
| 14.12 | Contractors used for maintenance repair <ul style="list-style-type: none"> SOPs and training on railroad safety sensitive items Method in place to monitor contract work Inspections / acceptance program (QA) | 1 | C | | |
| 14.13 | Asset Management System in place: <ul style="list-style-type: none"> Vehicle assets with safety critical function identified in plan Frequency of determining service condition Method of determining acceptable ranges of service condition that support levels of state of good repair | 1 | B | | |


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|  | | 15.0 Rules & Procedures Review | | PILLAR 4: SAFETY PROMOTION | |
| | | | | Checklist | |
| ITEM | ITEM DESCRIPTION | S | M | REMARKS | |
| 15.1 | <p>Rules and procedures reviewed and kept current</p> <ul style="list-style-type: none"> • Process/schedule established for reviews/updates • Results documented / distributed • Safety and security critical rules and procedures identified • Authority for issuing rules/policies defined • All rules/procedures in effect are held in a central location as controlled documents with copies maintained in each department as needed • Document controls for safety and security critical rules, procedures are incorporated within Configuration Management | 2 | C | Page 29 Items #8, 12, Page 30 Items 15, 17, Page 31 Items 18, | |
| 15.2 | <p>Administrative procedures in place to assure that safety and security critical rules, procedures, practices are given special recognition and/or precedence over others that may conflict</p> <ul style="list-style-type: none"> • Awareness or promotion programs (posters, bulletins, rule of the day/week, monthly theme, etc) • Formal method established to allow safety rules or procedures to be challenged and corrected before work begins. • "Whistle Blower" provisions extended to safety and security issues outside normal chain of command | 2 | C | Page 29 Items #7, 9, Page 30 Items # 13, 14, Page 31 Items #19 (Also see Element #22- Rail Corridor Operational Safety) | |
| 15.3 | Safety and Security involved in the approval/review of policies, rules & procedures affecting safety, health, fire, environment or security (as appropriate) | 1 | B | | |
| 15.4 | <p>Competency in following safety critical rules and procedures evaluated on an established frequency</p> <ul style="list-style-type: none"> • Training and post-training Ride Checks / Ghost Rider programs for Operating employees • Efficiency / proficiency testing programs in place for safety sensitive duties; evaluations documented and maintained • Failures require additional investigation for root cause and reinstruction or retest to establish correction in knowledge or behavior • Trend analysis performed to monitor program effectiveness | 2 | B | Page 30 Items #10, 11 | |
| 15.5 | <p>Safety critical functions governed by polices, rules or procedures incorporated into hiring, promotion, and succession planning practices</p> <ul style="list-style-type: none"> • Job descriptions • Performance Appraisals • Background checks • Drug/alcohol testing • New employees / Contractors • Transferred and/or promoted employees • Criteria established for physical demands, medical conditions | 1 | C | | |


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|  | 15.0 Rules & Procedures Review (continued) 16.0 Training & Certification | | PILLAR 4: SAFETY PROMOTION | | Checklist |
| ITEM | ITEM DESCRIPTION | S | M | REMARKS | |
| 15.6 | Documented guidelines establish required knowledge and skills needed for adherence to rules, procedures and safe work practices <ul style="list-style-type: none"> Competency evaluated in formal employee or contractor performance reviews Information from JSA / JHAs reviewed and revised as needed Procedural effectiveness systematically analyzed and reviewed for human factor impacts | 2 | C | Page 30 Item #16 | |
| 16.1 | Documented formal program in place for training employees <ul style="list-style-type: none"> Training policy established New hires / Contractors / Vendors On-the-Job Training Training simulation and/or computer-based training applications | 2 | C | Industry Leading Effective Practice – Pg. 33, Item #9 Page 33 Items #13, 14, Page 34 Items 16, 17, 18, Page 35 Items # 19 | |
| 16.2 | Safety critical training is identified and documented <ul style="list-style-type: none"> Pass / fail criteria established Safety critical questions review / verification process established | 2 | C | Page 34 Items #15, Page 35 Items # 22, 23, 24 | |
| 16.3 | Re-training program: <ul style="list-style-type: none"> Return to work after long-term absence Post-accident / multiple accidents Reclassification of employee Safety, security & emergency response refresher training | 1 | C | | |
| 16.4 | Trainers / Training program evaluated and periodically reviewed for effectiveness and course content (quality control) <ul style="list-style-type: none"> Qualification procedures for trainers Testing program validation established Test administration controls in place | 1 | C | | |
| 16.5 | Tracking system to determine when training is due and which training required for each job class at appropriate levels <ul style="list-style-type: none"> Annual and re-cert. training identified and tracked Amount of training budgeted / completed Training records centralized and program management established | 2 | C | Page 35 Item #21 | |
| 16.6 | Vendor training programs established and evaluated for learning objectives and content <ul style="list-style-type: none"> Training requirements specified in contract documents Program can be replicated in-house (train the trainer) Student / instructor manuals, visual aids, mock-ups, etc. provided | 1 | C | | |
| 16.7 | Inter-departmental coordination of safety training documented, incl. a common training policy adopted to ensure consistency and continuity of effort | 2 | B | Page 35 Items #20, Page 36 Items # 25 | |

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|  | 16.0 Training & Certification (continued) 17.0 Emergency Planning & Response | | PILLAR 4: SAFETY PROMOTION | | Checklist |
| ITEM | ITEM DESCRIPTION | S | M | REMARKS | |
| 16.8 | <p>Training and certification of employees performing safety critical functions takes into account policies, rules or procedures at time of hire, promotions, and in succession planning</p> <ul style="list-style-type: none"> • Job descriptions • Performance appraisals • Background checks • Drug/alcohol testing • Criteria established for physical demands and medical conditions | 2 | C | Item #26 | |
| 17.1 | <p>Emergency Management Plans developed and implemented</p> <ul style="list-style-type: none"> • Documented review and update process for Emergency Management Plans • All hazards (Severe weather operations, Mass casualty, pandemic event, Security event, etc) • Notification procedures established • Emergency response guidelines established • Training program developed & implemented • Defined role(s) of each employee and department in support of Emergency Management Plans • Public awareness programs implemented • Operations recovery / Continuity of Operations (COOP) | 1 | C | | |
| 17.2 | <p>Emergency response, planning, and coordination documented</p> <ul style="list-style-type: none"> • Within organization and with outside agencies • Roles & responsibilities defined between departments • Media relations guidelines documented • Passenger safety / customer assistance • Family notification / critical event counseling | 1 | C | | |
| 17.3 | <p>Emergency drills conducted either live or tabletop</p> <ul style="list-style-type: none"> • Post-drill meetings / critique conducted • Corrective action areas & follow-up noted • Procedural revisions / updates generated as needed | 2 | B | Page 37 Item #7 | |
| 17.4 | <p>Fire/life safety analysis & programs established</p> <ul style="list-style-type: none"> • Vehicles/Tunnels/Facilities/Operating Procedures • Applicable Fire/Life Safety Regulations • Documented annual review process and implementation for emergency procedures, safety rules, all hazards training and preparedness | 1 | C | | |

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|  18.0 Workplace Safety | | PILLAR 4: SAFETY PROMOTION | | Checklist | |
| ITEM | ITEM DESCRIPTION | S | M | REMARKS | |
| 18.1 | Employee Safety Programs: <ul style="list-style-type: none"> Occupational / Industrial safety programs developed and implemented (PPE, HAZCOM, Fall, Forklift, confined space, etc.) Employee accident investigation, role, reporting, and analysis process Proficiency testing /audits, assessments conducted by supervisors Occupational hazard prevention (employee injury reduction, human factors / human error prevention, behavior based safety programs in place) Safety awareness, recognition and promotion programs Wellness programs / off-the-job programs established | 2 | C | Page 40 Items #18, 19, Page 42 Item # 25, 26, 27 | |
| 18.2 | Workplace safety coordination: <ul style="list-style-type: none"> Documented labor / management participation, incl. joint inspections Safety meetings / communication Employee safety programs document systematic control of potential occupational hazards to health and safety, emergency procedures, medical surveillance, training, and record keeping | 2 | C | Page 41 Items #20, 21, 22, 23, Page 42 Items #26, | |
| 18.3 | Contractor compliance with railroad safety requirements documented: <ul style="list-style-type: none"> Contractor/agency safety unit coordination established Hazardous materials programs awareness Site safety plan documented and reviewed Site audits / inspections conducted and documented Process / contact person established for immediate correction of unsafe acts / conditions | 1 | C | | |
| 18.4 | Fitness for Duty: <ul style="list-style-type: none"> Drug & Alcohol program Audits of contractors and outside agencies that conduct the tests Policy for over-the-counter drug use Medical surveillance monitoring program Fatigue awareness program Employee Assistance Programs (EAP) Critical Incident de-briefing – Post traumatic stress | 1 | C | | |
| 18.5 | Job Hazard Analysis / Job Safety Analysis established <ul style="list-style-type: none"> Training provided to conduct JHA/JSA Re-evaluation performed (new equipment, new procedure(s), post accident, etc.) Scheduled reviews performed to determine if any change in frequency/severity | 1 | C | | |
| 18.6 | Cognitive Distraction Programs <ul style="list-style-type: none"> Policies established on workplace distraction and use of personal electronic devices Programs or technologies in effect to identify or reduce potential for attentiveness disorders | 3 | | | |

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|  | | 19.0 Contractor Requirements for Safety 20.0 Procurement & Stores | | PILLAR 4: SAFETY PROMOTION Checklist | |
| ITEM | ITEM DESCRIPTION | S | M | REMARKS | |
| 19.1 | Contracting for Services <ul style="list-style-type: none"> Safety plan reviewed as a contract deliverable Safety personnel qualifications established Specifications reviewed for safety/security requirements, roles, and responsibilities Reports provided on safety performance and cite frequency Contractor evaluations documented | 1 | C | | |
| 19.2 | Contracting for Infrastructure, Equipment / Materials <ul style="list-style-type: none"> Safety, QA, support documents reviewed Controlled storage / waste disposal; Emergency spill control MSDS sheet updates and distribution control Safety department involved in procurement process, when required (i.e., chemicals, safety equipment, etc.) Procurement process policy/procedure referenced where applicable Safety specification review of special / substitute / replacement parts and/or equipment Shelf-life policy coordination | 2 | C | Page 44 Items #10, 11, 12 | |
| 19.3 | Construction Management <ul style="list-style-type: none"> Construction safety plan includes railroad operational hazards such as RWP and safety certification process Construction safety manual developed and construction safety training required for management Written stop work policy established for safety critical tasks that pose immediate danger to life or health Scheduled work site safety/security reviews | 1 | C | | |
| 20.1 | Safety department involved in the procurement process when required (i.e. chemicals, safety equipment) <ul style="list-style-type: none"> Procurement policies and procedures address items identified as safety critical Quality Assurance is in place for safety critical items Items evaluated for HS&E compliance with regulations & industry standards | 2 | C | Page 46 Item #9 | |
| 20.2 | Procured materials <ul style="list-style-type: none"> Safety critical items identified and QA policies, procedures established Proper storage and shelf life Hazardous materials are properly stored, labeled and handled Obsolescence planning performed to remove or relocate equipment or acquire new technology | 1 | C | Industry Leading Effective Practice – Pg. 45, Item #1 | |

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|  | | 21.0 Passenger & Public Safety | | PILLAR 4: SAFETY PROMOTION | |
| | | | | Checklist | |
| ITEM | ITEM DESCRIPTION | S | M | REMARKS | |
| 21.1 | Passenger Safety and Security Programs <ul style="list-style-type: none"> Awareness & orientation to hazards Trespass and suicide prevention Communication / hazard reporting Incident / "near miss" reporting Corrective Action Plans applied to customer and public safety Customer safety and security data analysis and trending Public outreach programs Passenger emergency preparedness Suspicious package / person reporting Passenger behavior analysis and controls | 2 | B | Page 49 Items #14, 15, 16, 17 | |
| 21.2 | Operational Environment and Passenger Interface <ul style="list-style-type: none"> Elevator Escalator safety Emergency Alarms & Instructions Ingress/Egress & crowd controls Medical response capability Platform Gap and Edge safety 2nd Train hazard mitigation Door procedures Hazard signage Facility / platform maintenance and housekeeping | 1 | C | | |
| 21.3 | Design of Passenger Operational Environment <ul style="list-style-type: none"> Walking surfaces Adequate lighting and visibility Elderly and disabled passenger applications Crime prevention through environmental design (CPTED) Passenger Life Safety controls (e.g. Emergency Alarms, Telephones / Intercoms, ventilation systems) Parking lot vehicle/pedestrian controls Pedestrian crossings Vehicle design, construction, maintenance Audio Visual communication | 1 | C | | |
| 21.4 | Passenger Security Programs <ul style="list-style-type: none"> Criminal data analysis and trending Public outreach programs | 3 | | See Appendix for detailed review of security as requested by TTC management. | |
| 21.5 | Secure Passenger Environment <ul style="list-style-type: none"> Surveillance and crowd control equipment and procedures Monitored lots, waiting areas and platforms; patrols Emergency phones / alarms Lighting and visibility | 3 | | See Appendix for detailed review of security as requested by TTC management. | |

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|  | | 22.0 Rail Corridor Operational Safety | | PILLAR 4: SAFETY PROMOTION | |
| | | | | Checklist | |
| ITEM | ITEM DESCRIPTION | S | M | REMARKS | |
| 22.1 | Joint Railroad Operations, if applicable <ul style="list-style-type: none"> • Scope and extent of joint railroad operations described • Safety plans from participating railroads reviewed • Audits of operations performed and documented | 3 | | Not applicable | |
| 22.2 | Highway Grade Crossing Management <ul style="list-style-type: none"> • Highway traffic signal interface • Grade crossing awareness / education programs in place for vehicles and pedestrians • Safety inspections performed and hazard analysis developed for grade crossing areas • Process in place for review and resolution of hazards / safety concerns • Interface / interaction developed with local and state highway officials • Maintenance schedule developed with checklists, work orders, and follow-up tracking | 3 | | | |
| 22.3 | On-Track Safety Programs <ul style="list-style-type: none"> • Procedures established for planning and managing work on or near right-of-way, incl. allocation of ROW access, protection, tracking and documentation of ROW access, etc. • Documented Site Specific Work Plans (SSWP) which include at a minimum: description of work, means to identify and protect work zone, methods to account for approved access, and supervision (EIC) • Comprehensive Roadway Worker Protection (RWP) program incl. adherence to rules/SOPs, training, certification & retraining, on-track safety briefings, on-track maintenance equipment provisions, and monitoring of compliance | 2 | B | Page 50 Items #2, 3, 4 | |
| 22.4 | Trespassing & Intrusion Programs <ul style="list-style-type: none"> • Awareness / education programs in place • Security program for right-of-way documented • Safety inspections and trespass hazard analysis • Joint security operations to inhibit trespass activity, with sanctions for violations and reporting process | 1 | B | | |
| 22.5 | Suicide Prevention Programs <ul style="list-style-type: none"> • Engineered inhibitors: refuge areas, intrusion detection and surveillance • Community outreach, hotlines, media protocols • Employee awareness training • Employee / customer / 1st responder PTSD assistance programs | 1 | D | | |
| 22.6 | Guideway Evacuations <ul style="list-style-type: none"> • Procedures established for evacuation from each type of guideway including: elevated, at-grade exclusive, at-grade shared lane, or underground • Drills and exercises performed and documented | 1 | B | | |

APTA MATURITY MODEL KEY w/ LEVEL OF EFFORT EVALUATION GUIDE (COLUMN “M”)

A –

Planning / Initiating / Under Development

- No systematic approach is evident; information is anecdotal.
- Little or no deployment of any plans, process, or systematic procedures is evident.
- No organizational alignment, authority or accountability for the initiative is evident.
- There are no organizational performance standards or metrics and/or priorities attached to performance measures in areas reported.
- Trend data either are not reported or show mainly exception reporting.
- Frequency of reporting adverse trends doesn't allow for timely management response.
- Plans or activities are not in writing; may not align with mission, vision, and values.

B –

Initial Implementation / Developmental. In Place and Documented

- The beginning of a systemic approach to the basic requirements is evident.
- The approach is in the early stages of alignment with organizational needs and goals.
- Progress in achieving the basic requirements of the initiative is being inhibited by time, cost, management coordination or will.
- A few organization performance results are being reported regularly and acted upon.
- The beginning of a systematic approach to evaluation and improvement of KPIs is evident; some trend data are reported, with some adverse trends evident.
- Results are reported for a few areas of importance to the accomplishment to the organization's mission.

C –

Full Implementation / Goals & Performance Measures Established & Disseminated with Roles and Responsibilities

- An effective systematic approach, responsive to the basic requirements is evident.
- The approach is embedded within the organization and utilized by several departments leveraging value to their own departmental needs.
- Fact-based, systematic evaluation and improvement process coupled with a desire to surface and investigate small failures, anomalies, and near miss events to learn from mistakes are in place for improving the reliability and resilience of key processes.
- Good organizational performance targets are reported for most if not all areas of importance to the initiative requirements.
- Efforts to obtain comparative information and use of data driven performance are evident.
- Results are reported for many areas of importance to the accomplishment of the organization's mission, vision and values.

D –

Sustained Data Driven Managing & Measuring. Continuous Improvement Cycle & Focus on Risk Reduction

- Program or process incorporates a strong systematic approach, responsive to all corporate and department goals and objectives is evident.
- Organizational learning, and innovation, are supported for improving the efficiency and effectiveness of key processes.
- Key Performance Indicators have been evaluated against relevant comparisons and/or industry benchmarks and obtained a high level of accomplishment.
- The approach is valued as a contributor to success of the agency's mission.
- The success of the approach is quantifiable and has meaningful contribution to the agency goals.
- The approach exploits new technology or unique perspectives that advance safety improvements.
- The approach has a visible, positive impact on the safety culture of the organization.


Performance Above and Beyond Industry Expectations (Industry Leading Effective Practice)

Exhibits all characteristics in "d" plus:

- The program or process exhibits a sustainable risk-based approach which values continuous improvement and is responsive to inputs from throughout the organization and external stakeholders is evident.
- The approach is robust and pervasive within all areas of the agency and reviewed on an on-going basis. Method or technique that has consistently shown results superior to those achieved with other means.

Appendix

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Note: *The General Recommendations are intended to provide basic guidelines and a summary of findings as may apply to several areas of **Toronto Transit Commission**. Please refer to the Departmental Supplemental Forms for specific details that are applicable to specific areas of responsibility.*


Executive Summary

The TTC’s Transit Enforcement Unit (TEU), formerly referred to as *TTC Special Constable* services is performing at an admirable level considering their significant reduction in resources and expanding mission. The TEU is focusing on security critical activities, fare enforcement and assisting the Toronto Police Department with protecting the employees and customers in, and around TTC. Opportunities exist to enhance the security program and further serve and protect the customers, employees of TTC. APTA recommends that the management team prioritize the development of a System Security Plan (SSP). TTC should clarify the “security philosophy” they intend to implement, and appropriately dedicate resources to support the evolving security program. This will assist the TEU with re-focusing their efforts, clarifying their mission which is rapidly changing. TTC will need to determine the appropriate level of resources to support the evolving security philosophy as additional modes are converted to the Presto proof of payment fare collection system. The SSP should be reviewed annually and appropriately updated to reflect the changes within the organization to adequately address the vulnerabilities of the expanding system.

TTC should support information sharing with external stakeholders, including police and emergency services. TTC would benefit from strengthened partnerships, participation in table top, full scale exercises and emergency drills. Additionally, APTA highly recommends TTC engaging relevant stakeholders with special event planning for events such as the Pan Am and Parapan Am Games, hosted in Toronto in 2015. TTC should consider addressing the fragmented security responsibilities conducted by multiple departments including Human Resources, Safety department. TTC should also address the shortage of security critical subject matter experts, such as CPTED, Access Control personnel to assist with security design reviews, system security vulnerabilities and mitigating related security risks. Finally, TTC should utilize APTA Security Standards and further engage industry security committees to increase information sharing, use additional best practices and strive for continuous improvement.


The objective of the security audit focused on evaluating TEU methods, the overall security program, and providing relevant industry leading security best practices. The Security review focuses on TTC system’s System Security Plan and the system’s implementation of such plan and evaluates the extent to which a system’s management processes are complying with the plan. TEU currently does not have a SSP they are utilizing since the reorganization of 2011. The audit checklist is specifically designed to assess the

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SSP. The supplemental forms correspond with the checklist and provide the relevant details pertaining to the audit findings. The audit report does not, nor is it intended to represent an in-depth review or audit of the security of the rail system itself or of its operations, and should not be relied on as such. This report represents the initial findings and areas for improvement relative to TTC TEU.

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Security:

Effective Practice

1. APTA acknowledges the existing external partnerships the TEU has established with external stakeholders including Crime Stoppers and the Toronto Police Department’s Transit Patrol Unit (TPU). These partnerships are critical in assisting TTC in addressing All-Hazards and quickly responding to emergency situations. (14.3)
2. TTC was utilizing an “INCREASED VIGILANCE - OBSERVE AND REPORT” program which is identified in the *Corporate Security Escalation Plan, 2009*. This program is similar to “See Something, Say Something”, a commonly used and highly effective security best practice which encourages employee and customer vigilance, reporting and further secures the system. APTA acknowledges that TTC was utilizing this program and recommends TTC include it in the System Security Plan. (16.1)
3. APTA commends TTC for promptly increasing their security measures, security presence and security announcements following the recent terrorist attacks in Canada. These measures assist with securing TTC customers and also contribute to customers’ sense of security of the system during these unfortunate terrorist attacks. (14.3)
4. APTA commends the TEU for their contributions to reducing crime on TTC. This reduction has also contributed to the positive customer perception of security on TTC as evident by the customer satisfaction survey. (16.1)
5. APTA acknowledges that the “transit security” TEU team presently consists of 41 individuals who are in the process of converting to the Special Constable status. The Special Constables are divided between 4 Squads (10 each) and work in two person patrols. Minimum staffing levels consists of 6 per squad. If the line count falls below 6 TEU call out on overtime to backfill to bring to minimums. In addition to conducting regular fare checks TEU staff typically responds to up to 52 calls for service per day. They are supplemented in their security duties by a team of private security guards comprised of 2 Supervisors and 13 Guards. A (soon to be formed) team of 18 Fare Inspectors will have authority to inspect fares and issue tickets to fare violators but will not have Special Constable status. This initiative will be comprised of two forces, one sworn – one civilian,. (5.2)
6. The fare inspection group works from the same location as the Special Constables. The plan moving forward focuses on a decentralization model where “field offices” will be located along surface rail (streetcar lines) and in the streetcar divisions. The search for these locations is


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currently ongoing and a new streetcar division is being built incorporating an office for part of the fare inspection workforce to be assigned to that particular location. APTA acknowledges this effective practice. **(10.2)**

7. Special Constables perform illegal entry checks which often lead to the arrest of individuals who have outstanding warrants. APTA acknowledges this effective practice. **(17.1)**
8. There are approximately 2.2 Suicide attempts per month. This is down from an average of over 40 per year. Upon determination that there has been no foul play the Special Constables manages the investigation. All Sergeants are SOCO Trained and conduct the forensics investigation duties on scene. This is coordinated through a working relationship with coroner and TPS. TTC maintains a 45 minute average service disruption to restoration of service. APTA peer review auditor noted this level of efficiency is impressive. **(17.2)**
9. Next year TTC will increase the number of fare inspectors from 20 to 60. APTA acknowledges this increase and commitment to increased fare inspections also assists with decreasing crime by the presence of fare inspectors and their interaction with the customers. **(17.1)**
10. Access control to the revenue building is limited and restricted. Armored security is contracted to pick up funds from ticket vending machines. APTA acknowledges this practice, commitment to security. **(1.1)**
11. TEU uses an exhibit area for seized items, which is an industry best practice. They use a property management system that is integrated into the overall Case Preparation Program. Seized items are placed in a drop vault where that is utilized to secure evidence. The TTC Court Services Coordinator removes the property from the drop vault and transfers it to the Property Room on a predetermined basis. TTC's property room is a highly secure, designated area which is monitored by the appropriate TEU designee. **(8.2)**

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Action Needed

1. APTA recommends the Transit Enforcement Unit (TEU) develop a System Security Plan (SSP) to establish a transit policing philosophy and holistic Security Program to re-establish the security program within TTC after the redeployment in 2011. Senior management should review, approve and endorse the plan (which is similar in format to the System Safety Program Plan) to confirm TTC’s commitment to providing a safe, secure and reliable transit system. This plan is necessary for clarifying the security philosophy of TTC, implementing it within the security program and providing strategic resources to adequately perform this critical service. **(1.1)**
2. APTA recommends, in addition to the SSP, the TEU should also begin updating other necessary security specific plans including Security Escalation Plan and Security and Emergency Preparedness Plan (SEPP) and work with the appropriate TTC departments to develop a Continuity of Operations Plan (COOP). **(14.1)**
3. TTC is in the process of hiring 20 additional fare enforcement officers. As TTC converts to proof of payment for fare collection incrementally across the system, TTC will need many additional fare enforcement officers to support the lines when they fully convert to the Presto payment system. APTA auditors suggest as proof of payment verification is fully unveiled, TTC will need to evaluate the amount of manpower dedicated fare enforcement at least yearly to ensure adequate personal are applied throughout the system to verify payment of fares. **(14.3)**
4. TTC’s security culture is severely lacking and does not appear to be embraced by all TTC senior management. APTA suggests that TTC consider improving the security culture and work toward strengthening the moral within the TEU. Local municipal police such as Toronto Police Department have several priorities which may not fully align (and may possibly conflict) with those of TTC. The Toronto Police Department is not integrated within the TTC system and is does not directly support the mission of TTC. TTC should rely upon “in house” Special Constables to additionally assist with the Toronto Police Department with policing the system, calls for service, critical events and emergencies. Additionally, Special Constables within TTC can be held accountable for their performance and interaction with the public, along with promoting TTC’s mission, priorities. **(6.2)**
5. The TEU currently reports to the Chief Service Officer. In many instances, members of the TEU are utilized as customer service representatives instead of true security experts and Special Constables who are inadvertently assisting with Operations related functions instead of dedicated security related duties. APTA recommends that the TEU focus on security related duties, responsibilities. **(5.2)**

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6. APTA recommends the TEU strengthen partnerships with Special Constables, external stakeholders and continue to elevate the Security Working Group, which benefits all stakeholders. Additionally, APTA suggests TTC increase coordination with TPS to increase information sharing, collaboration and provide TTC access to crime data, transit related crime statistics. TTC will not be able to adequately determine preventive measure to address crime trends without the relevant data. **(14.3)**
7. APTA was informed that a Threat and Vulnerability Assessment (TVA) was conducted on TTC in 2011, however several of the recommendations were not addressed or implemented. APTA auditors recommend TTC conduct a new TVA to identify additional risks, vulnerabilities which may have materialized since the last assessment with the expansion of the system and other considerations and system modifications. TTC should address the recommendations, create a timeline and work plan for implementing the recommendations to adequately secure the people, property on and around TTC. **(7.2)**
8. APTA suggests that the TEU hire additional administrative staff to free up Special Constables so they can patrol the system, provide a visible deterrence to crime instead of performing administrative related tasks. **(5.2)**
9. TTC currently utilizes an in-house case preparation and reporting system. It is not a records management system (RMS) per se and offers limited search ability and intelligence capabilities. TEU is currently working with the TTC IT Department to move towards a modern RMS which may be integrated the TPS Versadex system. Organizational IT does not provide sufficient records management support to provide in-house intelligence at this time. This places TEU at a significant intelligence deficit which impacts the overall security awareness of TTC. APTA suggests TTC TEU correspond with Vancouver and other comparable transit systems and adopt similar industry leading best practices and utilize the tools, programs they have developed. **(8.2)**
10. TEU estimates that Sexual Assaults are one of the largest unreported crimes on the system. Customers are often embarrassed to report offences for multiple reasons which makes it difficult to eliminate the crime from occurring. APTA suggests TTC address this crime and develop a sexual assault prevention campaign and utilize industry leading best practices in this area, including promoting “See Something-Say Something” campaigns and other customer awareness outreach programs that have been very well received by the general public and have assisted with reducing this crime. This should lead to an increase in the level of reported sexual crimes and the program will ultimately contribute to increasing awareness, encouraging vigilance which will further assist with preventing these crimes from occurring in the 1st place. It is worth noting that these types of customer awareness programs have increased crime stats in other comparable transit


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agencies and may lead to inquiries regarding the increase of reports for this or similar type crimes.
(16.1)


11. APTA acknowledges TTCs current customer outreach initiatives and encourages TEU to further collaborate with other departments in promoting and enacting these programs. APTA encourages TTC to develop an “app” which to easily communicates with customers, encourages interaction which will address many of the unreported crimes with customers. TEU should work with the IT, safety and other relevant departments to address this issue. TTC would be well served by inquiring with the transit industry to consider the available options, best practices and which is appropriate for TTC. **(16.1)**


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|  1.0 System Security Plan Development & Commitment 2.0 Policy Statement & Authority 3.0 Purpose & Scope | | Security Checklist v1.0 | | | |
| ITEM | ITEM DESCRIPTION | S | M | REMARKS | |
| 1.1 | System Security Plan developed <ul style="list-style-type: none"> • Security activities documented • Security procedures defined • Types of security equipment used/maintained • Security personnel equipment issued • Security awareness (internal) • Security training • Public awareness/education • Revenue security • Disaster preparedness • Security emergency procedures • Communication procedures • Interaction with local/state/federal law enforcement • Facilities security and access control established • Security Sensitive Information identified and controlled • Security audit program established/implemented | 2 | A | SP pg 77, # 1 | |
| 1.2 | System Security Plan reviewed and updated periodically, and represents updates to the Strategic Plan, current Mission, Vision, and Values | 2 | A | | |
| 1.3 | System Security Plan communicated to the entire organization | 2 | A | | |
| 2.1 | Security Policy clearly stated, disseminated throughout the organization, and applied | 2 | A | | |
| 2.2 | Authority outlined for the development of the System Security Plan; Supported by legal, financial, political and regulatory resources to meet plan objectives | 2 | A | | |
| 2.3 | Authority for implementing System Security Plan defined <ul style="list-style-type: none"> • Interface between Agency and contract services defined • Any external Operating/Maintenance Agreements or MOUs establish safety and security roles | 2 | A | SF pg 77, #4 | |
| 3.1 | SSP purpose: <ul style="list-style-type: none"> • Identifies organizational security philosophy • Meets industry standards/ audit provisions • Employee involvement at all levels • Risk based systems approach to security management | 2 | A | | |
| 3.2 | SSP scope establishes: <ul style="list-style-type: none"> • A commitment to the management of security • Identifies some of the security policies needed in the organization • Framework for implementation of security policies and related goals and objectives | 2 | A | | |


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|  4.0 Goals 5.0 Identifiable & Obtainable Objectives 6.0 Strategic Planning | | Checklist | | | |
| ITEM | ITEM DESCRIPTION | S | M | REMARKS | |
| 4.1 | Security Program goals are clearly stated <ul style="list-style-type: none"> • Long-term, with broad and continued relevance • Meaningful with specific/desired results identified • Achievable • Integrated with corporate mission vision and values | 2 | A | | |
| 4.2 | Security Program goals are properly specific and endorsed by management, with the role of each department/division identified | 2 | A | | |
| 5.1 | Objectives of SSP are clearly stated and include performance measurements <ul style="list-style-type: none"> • Quantifiable, using proper scales or values as KPIs • Status reports to top management as part of regular top management meetings | 2 | A | | |
| 5.2 | Roles, responsibilities and authorities are defined <ul style="list-style-type: none"> • Implementation of internal and external safety communications/feedback on effectiveness and implementation of necessary changes • Status reports to top management as part of regular meetings | 2 | A | SF pg 77, #5 SF pg 78, #8 | |
| 6.1 | Policies/procedures for implementation of SSP objectives and accountability <ul style="list-style-type: none"> • Updates established and tracked • Policies disseminated to all employees | 2 | A | | |
| 6.2 | Roles, responsibilities and authorities are defined <ul style="list-style-type: none"> • Key positions at senior management level • Committee membership • Relationship of transit system to local/outside jurisdictions | 2 | A | SF pg 77, #4 | |
| 6.3 | Documented strategic planning/review process for updating, correcting and modifying SSP based on feedback on effectiveness of processes | 2 | A | | |


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|---|--|------------------|--|-------------------------------------|-----------|
|  | 7.0 Threat & Vulnerability Program 8.0 Security Data Acquisition & Analysis | | SECURITY ELEMENTS Auditors: Dave Hahn, APTA Doug Semple, Vancouver | | Checklist |
| ITEM | ITEM DESCRIPTION | S | M | REMARKS | |
| 7.1 | Threat & Vulnerability SOP: <ul style="list-style-type: none"> Threat and vulnerability identification / analysis / resolution methods established Mitigation process (Threat & Vulnerability Precedence) applied for new start or extension projects Development of procedures for coordination with all safety & security processes established including inspections, audits, customer reports, post-accident investigations, loss control reports, etc. Implementation of method to analyze and perform trend analysis of information gathered (lessons learned, KPIs, regional crime data, etc.) Training provided on threat & vulnerability identification, analysis, and controls Program reviews conducted as severe threats and vulnerabilities are identified to determine effectiveness of procedures and to detect changes in frequency or severity ratios | 2 | A | | |
| 7.2 | Threat & Vulnerability Evaluation and Categorization <ul style="list-style-type: none"> Formal / Informal analysis methods established and documented Threat and vulnerability severity and probability assessed through a predetermined matrix | 2 | B | SF pg 78 #7 | |
| 7.3 | Threat & Vulnerability Tracking and Resolution <ul style="list-style-type: none"> Open items are ranked, prioritized, and scheduled for actions leading to resolution Resolution methods documented and reviewed Routine evaluations performed to determine the status of documented threats & vulnerabilities Historical files on "closed" threats & vulnerabilities maintained Method established to track open items to closure does not allow duplicates or loss of data Responsibility assigned for mitigation actions Status reviewed to ensure appropriate closure and schedule adherence | 2 | A | | |
| 8.1 | Responsibilities defined for providing, receiving, processing, analyzing, reporting of security data <ul style="list-style-type: none"> Crime data reports Benchmarking process in place; lessons learned programs used effectively | 2 | A | | |
| 8.2 | Security data collection and reporting (tracking / trend analysis and data interpretation) <ul style="list-style-type: none"> Corrective actions documented, trend analysis performed Process for evaluating effectiveness | 2 | A | SF pg 78, #9 | |
| 8.3 | Key Performance Indicators for safety and security identified and used by management to lead organization <ul style="list-style-type: none"> Performance targets and metrics Measurement tied to dept. objectives and performance appraisal | 2 | A | | |

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|  | 9.0 Configuration Management 10.0 Safety & Security Certification | SECURITY ELEMENTS Auditors: Dave Hahn, APTA Doug Semple, Vancouver | | | Checklist |
| | ITEM | ITEM DESCRIPTION | S | M | REMARKS |
| 9.1 | Change management process is documented and utilized <ul style="list-style-type: none"> Identifies all stakeholders, including safety, in decisions affecting safety critical elements Tied to the hazard management process | 2 | A | | |
| 9.2 | Change Control Process <ul style="list-style-type: none"> Change review and control procedure established Authority for making configuration changes and process to incorporate changes defined Schedule for implementation of changes Incorporated into Document Control | 2 | A | | |
| 9.3 | Safety and Security Design Criteria manual developed and utilized | 2 | A | | |
| 9.4 | System Modification Process <ul style="list-style-type: none"> Policy documents scope and responsibilities Control authority under development for procedures, practices, facility, equipment, systems, manuals, rules, etc. Procedures for making configuration changes to the components, processes and practices found on the safety critical items list under development Acceptance and sign-off / approval includes safety/security Incorporated into Document Control | 2 | A | | |
| 9.5 | Document Control Program <ul style="list-style-type: none"> Established procedure for review, approval, and issuance of new and revised controlled documents Identification and control of external documents, e.g. vendor supplied documents, technical change bulletins. Prevent unintended use of obsolete documents Access controls for viewing, copy, distribution, removal Digital content management Document retention / destruction procedures | 2 | A | | |
| 10.1 | Safety / Security Cert. Plan documented and reviewed by management <ul style="list-style-type: none"> Safety & security committees (SSRC, FLSSC, etc.) established for all phases of project development Certifiable elements identified (SCIL) Design and construction conformance Test and verification plan Formal certification steps documented with sign-off Open items reviewed | 2 | A | | |
| 10.2 | Safety & Security Cert. applied to new starts, extensions, and major system modifications | 2 | A | | |

| APTA RAIL SAFETY MANAGEMENT PROGRAM SMS REVIEW (PILOT) | | CONTROL: 775-817 | | DATE OF REVIEW November 17, 2014 | |
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|  11.0 Security Assessment 12.0 Rules & Procedures Review | | SECURITY ELEMENTS | | | Checklist |
| | | Auditors: Dave Hahn, APTA Doug Semple, Vancouver | | | |
| ITEM | ITEM DESCRIPTION | S | M | REMARKS | |
| 11.1 | Security audit established and documented to ensure all organizational elements, equipment, procedures, and functions are performing as intended from a system perspective <ul style="list-style-type: none"> • Security programs developed/implemented • Audit schedules established/followed • Checklists prepared • Program deficiencies/potential hazards and weaknesses identified • Corrective actions identified / tracked for closure • Improvement recommendations made to system security program | 2 | A | | |
| 11.2 | Management Review Process <ul style="list-style-type: none"> • Security department manages audit findings and corrective actions • Formal documented review process • Action plans used to track and verify status of improvements identified in assessment reports • Follow-up meetings held between management staff to discuss individual audit findings | 2 | A | | |
| 11.3 | Document control established for internal audit program, including recommendations and follow-up actions | 2 | A | | |
| 12.1 | Rules and procedures reviewed and kept current <ul style="list-style-type: none"> • Process/schedule established for reviews/updates • Results documented / distributed • Regulations and standards adopted and applied • Safety and security critical rules and procedures identified • Authority for issuing rules/policies defined • All rules/procedures in effect are held in a central location as controlled documents with copies maintained in each department as needed • Process in place for updating/removing old materials • Incorporated within Configuration Management | 2 | A | | |
| 12.2 | Administrative procedures in place to assure that safety and security critical rules, procedures, practices are given special recognition and/or precedence over others that may conflict. <ul style="list-style-type: none"> • Awareness or promotion programs (posters, bulletins, rule of the day/week, monthly theme, etc.) • Rules and procedures enforced • Formal method established to allow security rules or procedures to be challenged and corrected before work begins • "Whistle Blower" provisions extended to safety and security issues outside normal chain of command | 2 | B | | |
| 12.3 | Detailed PIs, SOPS, or WIS in place that address person security of <ul style="list-style-type: none"> • Passengers • Employees • Police and emergency responders | 2 | B | | |

| APTA RAIL SAFETY MANAGEMENT PROGRAM SMS REVIEW (PILOT) | | CONTROL: 775-817 | | DATE OF REVIEW November 17, 2014 | |
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|  | 13.0 Training & Certification | SECURITY ELEMENTS | | | Checklist |
| | 14.0 Emergency Planning & Response | Auditors: Dave Hahn, APTA Doug Semple, Vancouver | | | |
| ITEM | ITEM DESCRIPTION | S | M | REMARKS | |
| 13.1 | Documented formal program in place for training employees, supervisors and management <ul style="list-style-type: none"> New hires/Contractors/ Vendors On-the-Job Training (OJT) Coordination of inter-departmental security related training Computer-based training and simulation applications | 2 | B | | |
| 13.2 | Re-training program <ul style="list-style-type: none"> Return to work after long-term absence Reclassification of employee Safety, security & emergency response refresher training | | | See H.R. | |
| 13.3 | Method in place to determine when training is due and which training required for each job class at appropriate levels <ul style="list-style-type: none"> Annual training identified; Re-certification tracked Amount of training budgeted / completed Training records centralized and program management established | | | See H.R. | |
| 13.4 | Trainers / Training program evaluated and periodically reviewed for effectiveness and course content (quality control) <ul style="list-style-type: none"> Qualification procedures for trainers Testing program validation and test administration controls in place | 2 | B | | |
| 13.5 | Security coordination with Transportation, Engineering, Maintenance and Safety training documented, incl. common training policy adopted to ensure consistency and continuity of effort | 2 | A | | |
| 14.1 | Emergency Management Plans developed and implemented <ul style="list-style-type: none"> Documented review and update process for Emergency Management Plans Notification procedures established Defined roles of each employee and department in support of Emergency Management Emergency response guidelines established; training conducted Public awareness programs Operations recovery/Continuity of Operations | 2 | A | SF pg 77, #2 | |
| 14.2 | Contingency SOPs developed and drills conducted for extraordinary circumstances, incl. terrorism, riots/domestic unrest, catastrophic events, system-wide communications failure, etc. | 2 | A | | |
| 14.3 | Emergency response, planning, and coordination documented <ul style="list-style-type: none"> Within organization and with outside agencies Plans and Protocols established for threat level escalation (DHS Homeland Security) Roles & responsibilities defined between departments Media relations guidelines documented Passenger security / customer assistance Family notification / critical event counseling | 2 | B | SF pg 77, #3 SF pg 78, #6 | |

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|  | | 14.0 Emergency Planning & Response (continued) 15.0 Contractor Requirements for Security 16.0 Passenger & Public Safety | | SECURITY ELEMENTS Auditors: Dave Hahn, APTA Doug Semple, Vancouver | | Checklist |
| ITEM | ITEM DESCRIPTION | S | M | REMARKS | | |
| 14.4 | Emergency drills conducted either live or tabletop <ul style="list-style-type: none"> • Post-drill meetings conducted; corrective action & follow-up noted • Procedural revisions / updates generated as needed | 2 | A | | | |
| 14.5 | Documented annual review process and implementation for emergency procedures, safety rules, all hazards training and preparedness | 2 | A | | | |
| 15.1 | Contracting for Services <ul style="list-style-type: none"> • Security plan reviewed as a contract deliverable • Security personnel qualifications established • Specifications reviewed for security requirements, roles, and responsibilities • Reports provided on security performance and cite frequency (monthly, quarterly) • Contractor evaluations documented | 2 | A | | | |
| 15.2 | Construction Management <ul style="list-style-type: none"> • Construction security plan includes railroad operational threats and vulnerabilities and safety/security certification process • Construction security manual developed • Informal work site security reviews • Security is part of regular construction progress reviews | 2 | A | | | |
| 16.1 | Passenger Safety and Security Programs. <ul style="list-style-type: none"> • Communication / threat and vulnerability reporting • Corrective Action Plans applied to customer and public security reports • Public outreach programs under development • Suspicious package / person reporting • Awareness & orientation to hazards • Trespass prevention • Suicide prevention • Communication / hazard reporting • Incident /" near miss" reporting • Customer security data analysis and trending • Public outreach programs • Passenger emergency preparedness • Passenger behavior analysis and controls | 2 | B | SF pg 78, #10 SF pg 79 #11 | | |
| 16.2 | Operational Environment and Passenger Interface <ul style="list-style-type: none"> • Emergency Alarms & Instructions • Ingress/Egress & crowd controls • Hazard signage • Facility / platform maintenance and housekeeping | 2 | B | | | |

| APTA RAIL SAFETY MANAGEMENT PROGRAM SMS REVIEW (PILOT) | | CONTROL: 775-817 | | DATE OF REVIEW November 17, 2014 | |
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|  | 16.0 Passenger & Public Safety (continued) 17.0 Rail Corridor Operational Safety | SECURITY ELEMENTS Auditors: Dave Hahn, APTA Doug Semple, Vancouver | | | Checklist |
| | ITEM | ITEM DESCRIPTION | S | M | REMARKS |
| 16.3 | Design of Passenger Operational Environment for Security Considerations <ul style="list-style-type: none"> • Walking surfaces • Adequate lighting and visibility • Elderly and disabled passenger applications • Crime Prevention Through Environmental Design (CPTED) • Passenger Life Safety controls (e.g. Emergency Alarms, Telephones / Intercoms, ventilation systems) • Parking lot vehicle/pedestrian controls • Vehicle design, construction, maintenance • Crowd control equipment and procedures • Monitored lots, waiting areas and platforms; Security presence/patrols • Audio Visual communication | 2 | A | | |
| 16.4 | Passenger Security Programs <ul style="list-style-type: none"> • Criminal data analysis and trending • Public outreach programs | 2 | B | | |
| 17.1 | Trespassing & Intrusion Programs <ul style="list-style-type: none"> • Awareness / education programs in place • Security program for right-of-way documented • Security inspections and trespass hazard analysis • Joint security operations to inhibit trespass activity, with sanctions for violations and reporting process | 2 | B | | |
| 17.2 | Suicide Prevention Programs <ul style="list-style-type: none"> • Engineered inhibitors, platform edge doors, refuge areas, intrusion detection and surveillance • Community outreach, hotlines, media protocols • Employee awareness training • Employee / customer / 1st responder PTSD assistance programs | 2 | B | | |
| 17.3 | Guideway Evacuations <ul style="list-style-type: none"> • Procedures established for evacuation from each type of guideway including: elevated, at-grade exclusive, at-grade shared lane, or underground • Drills and exercises performed and documented | 2 | B | | |
| 17.4 | Joint Railroad Operations <ul style="list-style-type: none"> • Scope and extent of joint railroad operations described • Security plans from participating railroads reviewed • Audits of operations performed and documented | 2 | A | | |

APTA MATURITY MODEL KEY w/ LEVEL OF EFFORT EVALUATION GUIDE (COLUMN "M")

A –

**Planning / Initiating / Under
Development**

- No systematic approach is evident; information is anecdotal.
- Little or no deployment of any plans, process, or systematic procedures is evident.
- No organizational alignment, authority or accountability for the initiative is evident.
- There are no organizational performance standards or metrics and/or priorities attached to performance measures in areas reported.
- Trend data either are not reported or show mainly exception reporting.
- Frequency of reporting adverse trends doesn't allow for timely management response.
- Plans or activities are not in writing; may not align with mission, vision, and values.

B –

**Initial Implementation /
Developmental. In Place and Documented**

- The beginning of a systemic approach to the basic requirements is evident.
- The approach is in the early stages of alignment with organizational needs and goals.
- Progress in achieving the basic requirements of the initiative is being inhibited by time, cost, management coordination or will.
- A few organization performance results are being reported regularly and acted upon.
- The beginning of a systematic approach to evaluation and improvement of KPIs is evident; some trend data are reported, with some adverse trends evident.
- Results are reported for a few areas of importance to the accomplishment to the organization's mission.

C –

**Full Implementation / Goals & Performance
Measures Established & Disseminated with Roles
and Responsibilities**

- An effective systematic approach, responsive to the basic requirements is evident.
- The approach is embedded within the organization and utilized by several departments leveraging value to their own departmental needs.
- Fact-based, systematic evaluation and improvement process coupled with a desire to surface and investigate small failures, anomalies, and near miss events to learn from mistakes are in place for improving the reliability and resilience of key processes.
- Good organizational performance targets are reported for most if not all areas of importance to the initiative requirements.
- Efforts to obtain comparative information and use of data driven performance are evident.
- Results are reported for many areas of importance to the accomplishment of the organization's mission, vision and values

D –

Sustained Data Driven Managing & Measuring. Continuous Improvement Cycle & Focus on Risk Reduction

- Program or process incorporates a strong systematic approach, responsive to all corporate and department goals and objectives is evident.
- Organizational learning, and innovation, are supported for improving the efficiency and effectiveness of key processes.
- Key Performance Indicators have been evaluated against relevant comparisons and/or industry benchmarks and obtained a high level of accomplishment.
- The approach is valued as a contributor to success of the agency's mission.
- The success of the approach is quantifiable and has meaningful contribution to the agency goals.
- The approach exploits new technology or unique perspectives that advance safety improvements.
- The approach has a visible, positive impact on the safety culture of the organization.

Performance Above and Beyond Industry Expectations (Industry Leading Effective Practice)

Exhibits all characteristics in "d" plus:

- The program or process exhibits a sustainable risk-based approach which values continuous improvement and is responsive to inputs from throughout the organization and external stakeholders is evident.
- The approach is robust and pervasive within all areas of the agency and reviewed on an on-going basis.
- Method or technique that has consistently shown results superior to those achieved with other means.

TTC Response to 2014 APTA Safety Initiative Report

| Element / Item # | Finding | TTC Accept or Reject | Safety Improvement Initiative / Rationale for Rejection | Date Due (dd/mm/yyyy) | Individual Responsible (Position and Dept if applicable) | Status | Closed Date (dd/mm/yyyy) |
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APTA Recommends

General / Corporate Safety

| | | | | | | | |
|-----------|---|--|---|------------|--|--|--|
| General/1 | Safety consultants were found to be well received by all departments interviewed. These employees were assigned at nearly every department visited and were working diligently on safety issues, identifying the solutions and then implementing them. Resolution of these safety issues created a need to log, track and keep current on the status on the many issues being dealt with on a database, as well as any additional corporate safety programs that needed implementation at the department level. If one database was not appropriate or did not exist, a new one was created, often in house. This has resulted in a plethora of databases being created with some departments having multiple databases in use. Islands of data exist all over the agency. APTA recommends consolidating data across the agency, making use of existing databases that would serve the whole agency and migrating data from those that are not maintainable or robust enough to support agency needs. | | ITS Department has conducted an Opportunity Assessment on SH&E needs at a corporate Level. Phase 1 will optimize the use of existing First Priority Enterprise software by configuring the incident management, hazard reporting and corrective action modules. Phase 1 will be complete when these 3 modules are available across TTC. | 15/12/2016 | B. Hasserjian, Manager SH&E Policy & Strategy, S&E | | |
| | | | Phase 2 would entail the purchase of an Enterprise EHS software platform to integrate all remaining needs. Phase 2 will be deemed complete when an approved scope of work is approved for funding in the capital budget. | 30/04/2017 | | | |
| 1/7 | APTA has noted that the TTC has initiated some progressive measures to address the departure from a historically centralized safety department team approach to the decentralization of some safety responsibilities to the departmental safety consultants and the creation of a Corporate Safety reporting directly to the CEO. This is a new structure for all concerned which has been constrained by moving too fast in some areas, too slowly in others and is particularly limited by the few formal and informal means of communication between corporate safety and departmental consultants and across departments. The proposal to staff a Senior Safety Consultant with responsibilities to coordinate with the Safety Consultants will help to partially address the safety issues, however it does not address all of the integrated management issues that are connected to it. APTA recommends that the TTC assess its SMS program implementation strategy from an integrated management perspective, incorporating lessons learned to evaluate and mitigate the barriers that negatively impact the successful implementation of the safety program elements | | The coordinating Senior Safety Consultant has been in position since April 2015. He will document the responsibilities of the departmental safety consultants and the S&E Department as a formal element within the SHE Management System and seek approval from the SX Committee following a consultation process with all stakeholders. | 31/12/2015 | Scott Cameron, Senior Safety Consultant, S&E | | |

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|------------------|--|----------------------|--|-----------------------|--|--------|--------------------------|
| 3/4 | The TTC does not have a national rail regulator for system safety – only a regulator for Occupational Health and Safety of the Workforce. This makes self-regulation by the TTC all the more important as the Commission relies on its own initiatives to advance its role as a safe, efficient and effective transportation provider in and around the City of Toronto. Accordingly, it is incumbent upon TTC’s management to adopt published Standards and Recommended Practices for rail and bus in an effort to become “defensible” for its action(s). Evidence exists to demonstrate that some Departments have made the effort to examine published Standards and Recommended Practices, such as ISO and APTA, and conducted a gap analysis to provide assurance they meet / exceed the elements provided. However, the examination / gap analysis has not been formally applied across the Commission. APTA recommends the adoption of applicable standards by TTC. | | The SHE Management System is based on the OHSAS 18000 standard and for each element, reference is made to applicable standards and best practices. In future, we will explicitly state the applicable standard being referenced for each element of the managed system. | 27/06/2015 | J. O’Grady, CSO | | 8/18/2015 |
| 4/4 | On the job injury reduction goals are set by the department managers and reviewed twice a month. The Corporate level of the organization receives a report out of the number of incidents, lost work days cases, and lost work days etc. If an injury occurs, the new Incident Investigation (Level 1 & 2) Report process is followed only at the department level. The setting of goals and reviewing them to reduce employee injuries at the department level should be on a common database to allow for trending and analysis across the agency. APTA recommends rolling up both data and actions taken at the department level to make them visible at the corporate level enabling a strategic approach and providing lessons learned that could benefit all operating departments. | | The establishment of goals and objectives for injury reduction has not been done consistently across TTC in the past. A new element in the SHE Management System to establish a formal and mandatory process is now in the comment and approval process. This process would establish a Corporate Review of performance leading to a standard set of annual goals to be cascaded throughout the organization. This process will parallel the budget process beginning in fiscal 2016. It will be considered complete upon the launch of the Review process. We currently have a common database for data and as noted in Finding #1 are developing a common database for corrective actions. | 30/11/2015 | J. O’Grady, CSO | | |

TTC Response to 2014 APTA Safety Initiative Report

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|------------------|---|----------------------|--|-----------------------|--|--------|--------------------------|
| 5/6 | <p>Safety Key Performance Indicators (KPIs) are considered to be owned by each respective department and are reported up to each department's head and ultimately to the Chief Operations Officer reported through the Safety Executive Committee meetings amongst executive leadership or required to be reported in the weekly Visual Management Center (VMC). Corporate safety-driven areas of priority are not reflected in KPI's currently reported with the exception of lost-time injuries (LTIs). APTA recommends the development, analysis of, and reporting of safety KPIs from all departments be incorporated into a single corporate wide database through the corporate safety department's safety assurance processes to allow them to tracked, analyzed and trended across the agency instead of just at the department level</p> | | <p>Contrary to the finding, TTC does have an integrated set of Corporate level KPI's that are reported by S&E Department to the monthly SX. A subset is posted weekly in the VMC. The KPIs are organized under five headings, namely occupational safety, customer safety, operational safety, environmental compliance, fire and security. In addition, the S&E Department reports select data broken down by department to the COO and the Chief of Service Delivery each month. The implementation of corporate safety priorities is also reported to the SX monthly by Department.</p> | N/A | J. O'Grady, CSO | | 6/1/2015 |

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|------------------|--|----------------------|---|-----------------------|--|--------|--------------------------|
| 6/4 | Based on the interviews conducted there is little evidence (within line departments) of a strategic planning process being used in the implementation of the safety management system (SMS) plan objectives, goals, responsibilities, authority or dissemination of progress. Most refer to the 5 year Corporate Plan as filling that need. APTA recommends the TTC formalize a strategic planning process to ensure the SMS implementation has higher visibility throughout the organization and is consistent with the corporate plan integration. | | At the time of the audit the S&E Department issued a moving 6 month schedule of forthcoming SMS elements to be considered by the monthly SX. This was based on a strategic planning report approved by the SX in July 2013 which set out the strategic plan for transition from the System Safety approach to a new SMS approach. The Corporate Procedure for Developing Corporate SH&E Policies and Processes was approved by SX in August 2014. The overall process has been documented in a report entitled "SH&E Planning - 2015 Goals and Objectives" prepared for SX Approval in June 2015. Going forward, the development of strategy will become both more formal and transparent through the implementation of the annual process for setting goals and objectives discussed in 4/4 above. | 09/06/2015 | J. O'Grady, CSO | | 6/9/2015 |
| 8/4 | Although there have been ongoing reports of "near misses" there was no clear definition of a near miss provided and they may be reported on at least three different types of forms, all with different data sets to capture the information. APTA recommends that the TTC develop a "Near Miss" program with definition of what constitutes a "near miss" and include this information in its applicable rules, procedures, reporting and training programs. | | Near miss incidents are included in the Corporate Program on Incident Reporting and Investigation. Implementation of this program is essentially complete and plans are underway to audit the implementation effort in Q4 2015. One aspect of this audit will be an examination of the effectiveness of near miss reporting. | 15/12/2015 | A. McKinnon, Manager Safety Engineering Services, S&E | | |
| 9/5 | Presently, there is no corporate level safety action tracking system. Methodologies to track data vary according to whatever degree a department's HS&E representative is comfortable. APTA recommends corporate safety actions tracking system should be purchased and/or developed to enable action plans and actions to be input and updating data can show trends according to the needs of the Commission. | | As noted in General 1, Phase #1 of the IT plan is to develop a corrective action tracking system in First Priority Enterprise. | 15/12/2016 | B. Hasserjian, Manager SH&E Policy & Strategy, S&E | | |

TTC Response to 2014 APTA Safety Initiative Report

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| 9/9 | There are currently no recommendations provided by the corporate safety department on how to improve or address non-compliance or non-conformance. Furthermore, no corrective action log or similar coordination between the corporate safety department and the affected individual department exist to manage the feedback loop and track the corrective action to closure. APTA recommends these enhancements be made to the SA protocols to improve the internal safety audit function and to formally document that the appropriate actions were taken to resolve areas of non-compliance or non-conformance. | | The Safety Health Environment Assurance Program which governs the SA Check process is being submitted for approval by the SX committee in June. SA Checks will be tied into the Enterprise Risk software such that Departments will set alert levels within the software requiring actions to be taken when compliance levels fail to reach targets. | 11/08/2015 | A. McKinnon, Manager Safety Engineering Services, S&E | | 6/9/2015 |
| 10/5 | The Corporate Biohazard Control Program (March 7, 2007) specifies the Biohazard Control procedures are to be reviewed at least annually. Controlled Documents have a requirement that such documents have a review frequency stated as a part of the document. While the cited document may have been reviewed at least annually for the past seven (7) years and there has been no need for a revision (we are not certain where the Superintendent – Occupational Hygiene and Environment Section, Safety Department now resides), APTA recommends the following: <ul style="list-style-type: none"> Such Controlled Documents are maintained with a Review / Revision Page to indicate the date(s) of the reviews and the nature of a revision, in the event one was warranted; Adding the necessary clause(s) to Section 2.10 (Track and Structure) – “Utility Crews are responsible for: Assisting with the initial clean-up...Conducting a final clean up...” following a Priority One to specify that a 3rd Party Contractor will be utilized to clean up a Priority One in the event the victim is a TTC employee and, Utilize a 3rd Party Contractor to clean up the track area and rail car undercarriage in the event the victim is a fellow TTC employee. | | The Corporate Biohazard Control Program is currently being reviewed and updated as part of the update to the SHE Management System. A Review/Revision page is part of the new standard format for corporate programs. The document has been circulated to Operations for comments and have been incorporated into the document as appropriate. A third part Contractor will not be used to clean up where the victim is a TTC employee. The revised version was approved by the SX Committee. | 14/07/2015 | M. Langdon, Manager Occupational Hygiene & Environment, S&E | | 11/8/2015 |
| 10/9 | Corporate Standards have been created by the migration of the information contained in the TTC System Safety Program Plan into a Corporate Standard. The Corporate Standards, e.g., Management of System Changes (Revision 4, dated March 2014) was Section 2.7 “Management of System Changes” of the SSPP. The document indicates the last Revision included only minor housekeeping updates. While this permitted the appearance of a recent review of the document, the reality is that a substantial and thorough review of the document needs to be accomplished to ensure that it is alignment with the new Safety Management System concepts adopted as part of the Integrated Management System. The document does not indicate / specify the review frequency, but does state, the “date of this review and update is yet to be determined.” A control document of this importance should be reviewed and updated on an established frequency. APTA recommends a target date be established for review and updating. | | A process and schedule for reviewing corporate SHE Management System Standards, Programs and Procedures will be established. | 30/06/2016 | B. Hasserjian, Manager SH&E Policy & Strategy, S&E | | |

TTC Response to 2014 APTA Safety Initiative Report

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| 10/13 | The Corporate-level Safety Management System documentation is “owned” by the corporate safety team; however, they do not own or manage lower level documentation. There is no corporate standard to which the departments must work in developing and updating their individual management systems and associated documentation. This is a significant weakness, which could lead to a mix of “good” and “bad” departmental SMS` s - with no certainty that over time they will be improving. APTA recommends the development of a document management hierarchy system that coordinates development and review of controlled documents. | | Departments have their own templates, hierarchy and process for creating procedures, however, new/updated department safety processes will be sent to the Safety Department for review in order to ensure consistency. | 01/07/2016 | Scott Cameron, Senior Safety Consultant, S&E | | |
| 12/15 | In the wake of the organizational shift towards the imbedded “safety consultant” approach, Department Heads who sought additional safety consultants than what was allotted have taken different approaches to securing “imbedded” safety resources. One Head reportedly sought an additional safety consultant staff and was directed to “negotiate” positions to fulfill a “zero based budget”. Another Head instead created and filled a “program manager” position tasked with health and safety responsibilities specific to their department. The lack of guidelines or organizational framework criteria appears to have, at least in part, created disparate departmental efforts to lead safety initiatives and perform safety-related functions within each department. APTA recommends TTC evaluate and develop corporate guidance and policy in regard to the resourcing, roles, and responsibilities of “safety consultant” staff, and to the extent possible, eliminate duplication of efforts by consolidating or re-purposing positions which may have overlapping safety responsibilities, such as “health & safety project managers” or similar. | | The TTC is reviewing the roles of the various safety professionals throughout the company. The TTC is committed to developing corporate guidance in regard to the roles and responsibilities of Safety Consultant staff in order to eliminate duplication of work and areas of responsibility. See General 1/7 | 31/12/2015 | Scott Cameron, Senior Safety Consultant, S&E | | |

TTC Response to 2014 APTA Safety Initiative Report

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| 15/7 | <p>The Subway / SRT Rule Book Revision and Track Level Safety Committees were initially established following the completion of the investigation of a fatal accident in 2012. The formalized Subway / SRT Rule Book Revision and Track Level Safety Committees were initiated in July 2014 and May 2014, respectively. TTC has begun to take steps that are designed to improve the level of communication and defining improved efforts to clarify existing information and improve the level of safety for employees working at track level. However, such efforts are not making the progress that was anticipated, as evidenced by the fact that two members of the Track Level Safety Committee resigned their "positions," due to the lack of progress being made. APTA recommends the TTC review the work of these committees to determine if they can be made effective.</p> | | <p>The Deputy Chief Operating Officer (DCOO) now attends the committee on a quarterly basis. A new high level steering group for safety in the subway group (including track level has been established chaired by the DCOO. Joint co chairs of the Track Level Safety Committee (TLSC) are members of this steering group and act as the link between the work of the two groups.</p> <p>The 2015 safety initiative for the Subway Group includes some of the previously stalled proposals of the TLSC including PPE and Track Access Controllers are currently being implemented.</p> <p>ATU 113 continues to NOT support the TLSC with no reps on the TLSC as of August 2015. Continuing dialogue with ATU 113 should resolve the impasse by the end of 2015. However, the work of the TLSC continues between staff members and other trade unions</p> | 31/12/2015 | M. Palmer, DCOO | | |

TTC Response to 2014 APTA Safety Initiative Report

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| 15/16 | Line Departments have operating rule books and are responsible for rules development, update and sign-off. The Rule Book Committee charter was not well defined and the authority to sign off rule book not formalized. Standard operating procedures (SOPs) are approved by local department heads as a means to supplement the rule book. APTA acknowledges that the TTC is in the process of assessing its current processes within each department as it relates to the development, modification and/or deletion of a rule and provide clear guidance as to who has authorization to approve such changes. In addition to this effort, APTA recommends that the role and authority of established Rule Book Committees needs to also be clarified as well as how these committees are linked across departments and to the Safety Executive Committee (SX). Finally, it is suggested that the TTC consider the Rule Book Committees to be supported by some working groups on specific topics and areas of focus as required. | | The subway rule book committee is now established and have already produced the first revision to the Subway Rule Book (SRB). This first revision has incorporated all previous red top notices into the SRB so it is up to date. The Deputy Chief Operating Officer (DCOO) has committed to a an annual revision. The 2016 revision has an October 2015 copy deadline and a January publishing date . The 2016 version includes previous omissions from the SRB and a new section on One Person Train Operation for Line 4. The DCOO has instigated a formal sign off process for all rule changes. Red Top notices are no longer used for communicating SRB changes. Blue tops have been introduced to the TTC and will be exclusively for SRB additions, deletions, clarifications and amendments. Blue Top Notices will only be sent to recipients of the SRB. Newly established working / steering groups include OPTO rules, and subway safety which have representatives from the track level committee including staff and union co- chairs. | 31/10/2015 | M. Palmer, DCOO | | |
| 17/7 | The last live emergency drill conducted for the Streetcar Department was reportedly approximately nine years ago (Spadina Station). APTA recommends regular emergency drills be carried out for each transportation department and that SOPs for conducting drills include after-action reports and post-drill meetings or critiques. | | In 2014 before the LFLRV went into service, over 25 simulations were held with the fire department which involved extricating a victim from under the vehicle. These were repeat again in Q2 of 2015. The corporate field exercise for 2016 will center around an LFLRV being evacuated with a crush load in a smoke filled tunnel section. | 15/12/2016 | R. Duggan, Manager Fire Safety & Emergency Planning, S&E | | |

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| 18/17 | The Streetcar Transportation, Stations, Track, Structures and Rail Cars & Shops Department Managers interviewed were unable to identify the number of injuries incurred departmentally during 2013; nor for Year-to-Date Injury numbers. Hence, they have a difficult time being able to specify whether they have been successful, or not. The concept of trying to drive down those numbers has been a Key Performance Indicator (KPI) of the Commission for many years. The statistics are available for review each month. However, there has been no translation from the identification of injuries and trends to create an Injury Reduction Plan for the Department. APTA recommends the managers and safety consultant evaluate the information available and create an Injury Reduction Plan to drive the number of a particular type of injury in 2015. | | The Safety & Environment Department will provide a breakdown of lost time and non-lost time injuries by department beginning September 2015. This information will be reviewed by each department for trends and will be used as a departmental KPI for monitoring the success of various safety initiatives implemented in each department. In lieu of each department creating an injury reduction plan, each department will follow the Corporate Safety, Health & Environment Goal & Objectives Procedure. | 30/09/2015 | G. Shortt, COO | | 8/17/2015 |
| 18/23 | Part B of the new Incident Investigation (Level 1 or 2) Report form asks that if the manager filling out the form thinks the incident could occur in other area that the form be sent to those areas. This method of communication leaves too much to the understanding of the managers of which areas would benefit from the information. APTA recommends a formal process be established to communicate both the HIRAs and the root cause agency-wide so that all employees have access to lessons learned. | | See response to General/1. By using the First Priority Enterprise software for managing incident data as planned in Phase 1, all safety consultants will have access to all incident reports. Providing access to all employees will be considered as part of Phase 2. | 30/04/2017 | B. Hasserjian, Manager SH&E Policy & Strategy | | |
| 18/24 | The Incident Investigation (Level 1 or 2) Report is only reviewed by the safety consultants at the manager's discretion. To improve tracking, the consistency of determining the root cause analysis and managing corrective actions, APTA recommends all Level 1 & 2 Reports be reviewed and signed by the safety consultants. | | The TTC agrees to having all Level 2 reports reviewed and signed by the Safety Consultants and evaluate the quality of a set sample size of Level 1 incident reports. | 31/12/2015 | Scott Cameron, Senior Safety Consultant, S&E | | |
| 18/25 | Maintenance departments hold weekly safety meetings exhibiting strong partnership which currently exists between Maintenance department safety consultants, labor unions, and department management. However, it was reported that the corporate safety department does not regularly send a representative to these meetings. The role of the safety consultant is to, among other things, lead corporate safety initiatives, however, this is carried out in different ways across the organization. APTA recommends corporate safety department adopts guidance and SOPs for communicating progress of departmental and corporate safety initiatives up to the Chief Safety Officer and laterally amongst departments. | | As part of the mandatory review of new/updated department safety procedures by the Safety Department, new and improved processes will be communicated laterally amongst departments. Local safety initiatives will become a formal part of the SC weekly meeting | 30/09/2015 | Scott Cameron, Senior Safety Consultant, S&E | | |

TTC Response to 2014 APTA Safety Initiative Report

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| 18/27 | It was evident through several interviews with senior leadership that initial corporate safety initiatives were received with varying success, and that consistently, departments struggled to adopt them. Notwithstanding corporate initiatives, each area has developed individual strategies and initiatives, generally carried out at least in part by each respective safety consultant who sets his/her own process and schedule. APTA recommends the "safety consultant" function be guided formally by the corporate safety department and that the existing state of the position be evaluated for conformance. | | At their June 2015 meeting the SX committee adopted a new Corporate Procedure on setting safety health and environment goals and objectives and a plan for all remaining initiatives for 2015. In this way the future rollout of the SH&E management system will be predictable and transparent. See also response to Item 1/7 regarding the guidance of the safety consultant function. | N/A | J. O'Grady, CSO (S. Cameron) | | 6/9/2015 |
| 19/10 | Fluid tank management is a risk concern and is periodically audited by Corporate Safety to ensure proper mitigation measures are in place. However, there is no tank management program or programmatic inspection program in place to monitor this exposure risk. APTA recommends that the TTC evaluate this risk and exposure associated with its fluid tank management program and initiate additional program measures as required to achieve an acceptable risk level. | | An updated Environmental Plan was prepared under the new SHE Management System. An element of the Plan is a Tank Management Program which will bring together all the individual initiatives currently being done by various departments with respect to tank management. In the interim, the risk is being managed through tank inspections conducted by various TTC Departments. | 13/12/2016 | M. Langdon, Manager Occupational Hygiene & Environment, S&E | | |
| 21/14 | Presently, there is no target / KPI related to passenger / patron safety in a TTC Station. At least one World Class transit agency requires Station Masters and staff to have targets and develop action plans designed to limit of the number of customer injuries that occur in "their" stations. APTA recommends development of customer safety KPIs. Further, APTA recommends that Corporate Safety assess its current capabilities to support passenger injury / accident analysis and mitigation measures and develop recommendations to improve efficiencies. | | The monthly KPI report presented to the SX includes a breakdown of customer injuries by each vehicle mode and, for the subway, there is a further breakout between stations vs on board trains, by line and by individual station for the top 5 incidents over the past 12 months. S&E Department has recruited a statistical analyst who offers customized reports to any manager. | N/A | J. O'Grady, CSO R. Leary, CSO | | 6/3/2015 |

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| 21/16 | TTC Corporate Safety has established sound programs focused on workplace safety. There is a need to increase program development and departmental support in areas of customer and public safety on Subway, Streetcar and Bus operations. APTA recommends that Corporate Safety assess its safety promotion efforts in the areas of passenger and public safety and work with the operating departments to develop passenger and public program initiatives based on risk exposure. | | At the January 2015 Board of Commissioners meeting the Chief Safety Officer presented the TTC's 12 Safe Service Action Plan to improve passenger and public safety in relation to buses and streetcars. One element of this plan was a customer communications plan aimed at pedestrians. This was a joint effort between Customer Communications Dept and City of Toronto Traffic Services. | N/A | J. O'Grady, CSO R. Leary, Chief Service Officer C. Thoun, Head, Customer Communications | | 4/24/2015 |

Operations

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|-------|--|--|--|------------|----------------|--|----------|
| 14/11 | Other than at Rail Cars and Shops, there is no formalized Fleet Maintenance Plan that establishes preventive maintenance / overhaul policy, employee training / certification, Department objectives, spare ratio goal, procedures, etc. APTA recommends that Fleet Maintenance policies be codified to ensure safety critical processes are adequately addressed. A Fleet Maintenance Plan is typically used, per industry practice, to serve this need. | | Fleet plans are presently being updated for 2016. | 31/12/2015 | G. Shortt, COO | | |
| 19/11 | The maintenance department has created a new sign-in process for contractors where an explanation of the need for a safety awareness is provided prior to the contractors going to the worksite. A full safety briefing is conducted and documented at the job site. An additional job safety briefing is conducted at the individuals work site before work is allowed to start, however this job site safety briefing is not documented nor signed for by the workers. APTA recommends that both the safety briefing and the job site safety briefing be documented and signed by each employee. | | The sign in process for contractors at bus garages includes a safety briefing that is documented and signed off by the contractor employees working at the site. | N/A | G. Shortt, COO | | 8/7/2015 |

Risk Management

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| 7/8 | The new Enterprise Risk Register initiative will take a couple of years to fully implement (2017). In the interim, APTA recommends reinforcing departmental hazard management processes as a means to increase awareness of the importance of hazard identification, reporting, assessment, and mitigation. | | While it will take till the end of 2017 to have a mature risk register, the implementation of the ERM program is underway. As part of the deployment, departments are engaged in the identification, reporting, assessment, and mitigation of risk. All Safety Consultants have been trained on standard risk management processes and focusing their efforts on the management of significant risks. | N/A | | | 6/1/2015 |
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| 7/9 | Hazard and Risk analysis departmental work methods are not consistent in their application. APTA recommends the establishment of a standardized hazard management database process to capture hazards across the organization (Hazard Log) that can be transferred to risk register as designed. | | HIRA database already exists, however as indicated the application is not consistent. A standard process for risk management will be issued by end of 2015. | 22/12/2015 | Mohamed Ismail, PRA, RMO, S&E | | |
| 7/10 | The hazard management processes are focused on occupational health and safety needs. New assets/systems are developed by the contractors and turned over to TTC upon project acceptance to add to the risk register. However, there is a need to apply hazard management processes to existing systems, customer and general public safety related exposures. APTA recommends extension of the hazard management process into the areas of existing systems, customer and general public safety. | | ERM scope covers all risks to TTC including safety risk to our passengers, employees, and the public. A mature risk register will be in place by the end of 2017. | 22/12/2017 | Mohamed Ismail, PRA, RMO, S&E | | |

Safety Consultants

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| 8/5 | While supervisors are adequately trained to respond to and investigate collisions and incidents, department safety consultants do not receive such training. APTA recommends all safety consultants be trained on safety incident/accident reporting, investigation, and analysis SOPs. | | All Safety Consultants will have received formal accident investigation training by the end of 2017 | 31/12/2017 | J. O'Grady, CSO (S. Cameron) | | |
| 12/14 | The safety consultants recently imbedded in departments throughout the TTC are developing their priorities and standards seemingly on their own. While the safety consultants meet as a group once a month there does not seem to be adequate interface with the corporate safety department. APTA recommends improvements in communication to ensure that the safety consultant roles and responsibilities are developed and carried out consistently and that formal lines of communication are clearly understood. | | Safety Consultants now meet together every week guided by the new Senior Safety Consultant who ensures formal and informal lines of communication are clearly understood. Safety Consultant activities are monitored for consistency. First Priority & Corporate Safety G&O procedure will help standardize the setting of priorities and safety action plans for each Department | 01/05/2015 | J. O'Grady, CSO (S. Cameron) | | 6/1/2015 |
| 18/22 | Some safety consultants have progressed further along with the implementation of corrective action plans and tracking to completion than others. APTA recommends the methodologies applied in implementation of corrective actions plans be made more consistent. | | See response to recommendation General #1. | N/A | | | |

Streetcar

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| 15/19 | The 2013 revision of the Streetcar Department Rulebook largely did not involve front-line employees or line managers from all departments involved with Streetcar operations. Accountability for the Streetcar Rulebook was not clear in the discussions with staff. There does not appear to be a rules committee in place for assessing and updating rules, nor does the rule book appear to be issued over the signature of someone in authority. APTA recommends that ownership be assigned to the Streetcar Rulebook. APTA recommends rulebooks, directives and SOPs be regularly reviewed and that front-line employees be provided the opportunity to participate in the review process | | Ownership for the Streetcar Rulebook has been assigned to the Streetcar Department. Two Safety Consultant vacancies in the Streetcar Department will be filled by September 2015. One of the Safety Consultants will be assigned responsibility in January 2016 to develop a Streetcar Rulebook Committee and processes for the review and updating of the rulebook. | 31/07/2016 | G. Shortt, COO & R. Leary CSO | | |
| 18/19 | During the Roncesvalles Streetcar Shop Tour, it was noted that there were no locking devices applied to the two car lifts that were raised and personnel were working underneath the Streetcar. The lifts had switch covers broken off and anyone passing by could drop something on the console, causing the lift to descend back to floor level. The foreperson was called over and told the team that special plastic caps were issued to the employees and that they were trained to use them. However, the employees indicated they knew nothing about the Lock Out / Tag Out devices or their application. APTA recommends TTC place additional focus on Occupational and Industrial Safety program adherence. | | As noted above in 4/4, a more detailed schedule for program development will be tabled at the June 2015 SX meeting . This plan includes a number of programs aimed at controlling the fatal risks in the workplace. Lock Out Tag Out preliminary work is underway. The initiative will be deemed complete upon program approval. | 11/04/2016 | B. Hasserjian, Manager SH&E Policy & Strategy | | |
| 18/20 | APTA recommends that the items / elements contained in the safety briefing at the Roncesvalles Streetcar Maintenance facility is codified to a checklist, which can be used by any individual who may be conducting such a briefing at the facility. | | A Visitor Safety Briefing has not been a normal function of the Streetcar Carhouses. We are taking this opportunity from the recommendations provided to address this deficiency in our procedures. In response to the above item the Safety Briefing contained above has been addressed through a "Visitor Information package". This package is still in draft format, with anticipated edits and corrections. Final information package is expected to be completed by the end of August 2015. | 30/08/2015 | S. Lam, Head of Streetcars | | |

Subway Operations

TTC Response to 2014 APTA Safety Initiative Report

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| 15/8 | The revised track level worksite coordination procedure concerning the roles of the Person In Charge (PIC) and Work Area Coordinator (WAC) is currently being reviewed for formal adoption. The document is reportedly "owned" by the Deputy Chief of Operations. It was not clear whether or not the Safety Department was involved in its creation nor whether the approval of the Chief Safety Officer is ultimately required. Considering the potential system-wide impacts, APTA recommends that such a procedural change be reviewed and approved by the safety department. Considering the strategic prioritization which places track level worker safety as a high priority (as a result of recent track worker fatalities), an authorization schedule be revised to reflect accountability of executive leadership. | | A new Track safety steering group has been established under the chairmanship of the DCOO. This group complements TLSC and is a high level strategy group looking at the issue of subway safety - not just at track level. The joint union chairpersons of the TLSC are on this steering group, though ATU 113 continues not to participate at meetings at present. The Roles of PIC and WAC have been discussed at this new group. The DCOO has declared himself custodian of the SRB including all job titles and role descriptions. EIC is being phased out. PIC will be the only term used to denote the person in charge of work at track level. The WAC role is being developed including a Training Needs Analysis, and a pilot scheme for shared work zones ready for their reintroduction later in 2015 | 30/09/2015 | M. Palmer, DCOO & J. O'Grady, CSO | | |
| 15/9 | Although undated, it is believed that following a fatality, a "Red Top Notice" entitled "WORK ZONE LIGHTS" was created on a document with a red-background header "Operations & Safety Group," which dealt with the establishment of "Impassable," "Major" and "Minor" Work Zones. The document was signed off by the (then) Deputy Chief Operating Officer Rail and numbered "06-261 Notice #89." An exception is taken to the fact that such a document can be created and issued with such deficiencies and was not questioned by those who "read and understood" the information contained therein. APTA recommends tighter administrative controls over the way operating rules are initiated, modified or removed. | | The SRB now has a dedicated manager, and the DCOO is the owner of the book. Red Top notices have a number of deficiencies in their control and issue. Starting in July 2015, BLUE TOP notices will come into force which will only refer to SRB changes, modifications, clarifications, new rules etc etc and will only be sent to employees who possess an SRB and have had SRB training | 31/07/2015 | M. Palmer, DCOO | | |

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| 15/12 | There is no requirement for follow-up Safety Briefings (documented or not) to be conducted in Work Zones when it has been noted that conditions have changed, e.g., weather conditions or an additional worker. APTA recommends use of APTA Standards for establishing work zone safety. | | As part of a new track access booking system / planning tool, tool box briefings will be recorded at the start of shifts. Any changes to a work zone mid shift or at shift change will be noted and briefed out. | 31/12/2015 | M. Palmer, DCOO | | |
| 15/13 | Within the week of meetings / discussions, the review team was not able to determine (to its satisfaction), the differences between the concepts of "Employee In Charge" (EIC, as specified in the Subway /SRT Rule Book); Person In Charge (PIC) and Work Area Coordinator (WAC). That being said, one of those titles has the responsibility for being <i>the point of contact</i> in charge of a work zone of some size. The designated individual conducts a "Tail Gate" Meeting with the employees to discuss hazards / safety mitigation measures, etc., related to the work within the work zone. The Tail Gate Meeting items (hazards / mitigations, etc.), is not documented and requires no sign-off to indicate understanding / acceptance / challenge for workers in the work zone; APTA recommends a written safety briefing and sign off be implemented. [NOTE: A Safety Briefing is documented at the initial place where the workers / employees report for work, which primarily refers to the JHAs appropriate to the individual tasks at hand.] | | The role of the EIC is being withdrawn and only PIC will be used. This removes confusion and provides clarity as the Person in Charge may not be an engineer. A revised briefing is being introduced along with a daily log book. The PIC will be required to list all staff under their supervision and details of the safety briefing issued. No sign off by individuals will be sought as it will be the responsibility of the PIC to deliver the briefing, record it's contents and the recipients of the briefing | 30/09/2015 | M. Palmer, DCOO | | |
| 15/18 | The Track Level Safety committee conducted international benchmarking to identify good practice in this area. A number of initiatives were identified and Work Area Control was initiated as a trial. However, other proposed improvements were reportedly held up due to extensive consultation in the departments. There needs to be a greater urgency of improvement in this area. It is recommended that the governance of this program is streamlined to ensure proper input but against much shorter implementation schedules. It is also recommended that a strong cultural change program is associated with this project as it was noted that in none of the work areas visited was this program visible on noticeboards etc. | | The TLSC has been underperforming for months and years due to a turnover of members and non buy in by senior managers. The DCOO now attends meetings quarterly, and the Local 2 joint chair also sits on the Subway Safety Steering Group (SSSG) . (ATU 113 is not currently participating due to a dispute with TTC due to be resolved shortly) The DCOO is currently bringing the TLSC closer to his visibility and a number of best practise elsewhere are now being adopted by the TTC | 31/12/2015 | M. Palmer, DCOO | | |

TTC Response to 2014 APTA Safety Initiative Report

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| 18/21 | The work of the Track Level Safety Committee should be expedited. The current "consultation" arrangement appears to delay implementation of key safety programs. APTA recommends the governance arrangements for consultation and accountability to decide and direct change in this area should be defined. | | The TORs for the TLSC committee are being revised. The SSSG and the DCOO are working with the co chairs (Mgt and unions) on streamlining the committee, making it more effective and bringing home some of the projects and initiatives already under way | 31/12/2015 | M. Palmer, DCOO | | |
| 22/2 | Those establishing a worksite in revenue hours are required to call in and call back to Traffic Control to confirm they are entering and clear of the track. (The names / number of employees in the crew is not required to be transmitted and recorded by Traffic Control.) In non-revenue Hours the "call in" / "call out" is not required. APTA recommends use of industry standards for establishing work zone safety. | | This recommendation is currently only partially accepted. A new method of booking and taking access at night is currently being introduced along with the role of Track Access Co-ordinator. The TAC will be in the control room on nights 365 days a year and will manage work carried out. Work is continuing to standardise the process between days and nights so there is consistency. | 31/12/2015 | M. Palmer, DCOO | | |
| 22/3 | There is no ongoing "competence management" of track safety as such, just refresher training. The Corporate Quality team does undertake checks / audits, but there are no line management competence assessments. APTA recommends that Line Management and their superiors conduct quality checks of the track safety program. | | As part of the introduction of the TAC, an auditing role will be introduced of working being carried out on the track as part of the new access arrangements. One of the new workstreams for the SSSG is introducing a competency management system including ongoing assessment of individuals to carry out roles. A new licensing system including measuring of competence to carry out a role is being developed for introduction through 2016. This includes the introduction of a log book where individuals will be required to maintain a record of "flying hours" as part of their demonstration of competence | 31/12/2016 | M. Palmer, DCOO | | |

Subway Transportation

TTC Response to 2014 APTA Safety Initiative Report

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| 15/10 | <p>Red Top Notices are utilized to provide information to employees whose duties are affected by the information presented. Such information should only relate to the Subway /SRT Rule Book and serve no other purpose. That being said, the Notices contain no "Acceptance / Understanding Sign-off." Individuals sign to indicate acceptance of the Subway / SRT Rule Book and need to sign off that Rule Book information has been changed in some manner. While Red Top Notices are placed on Bulletin Boards under headings "Must Know," "Need to Know" and For Your Information" such Notices are created by many individuals and may lead to the placement of Notices on an inappropriate Board. The TTC has not established a Hierarchy of Documents Policy that defines the purpose of individual documents. APTA recommends that issues to be considered include:</p> <ul style="list-style-type: none"> · Identify the Subway / SRT Red Top Notice or Streetcar Red Top Notice as the only document to be issued to add, delete or amend a Rule and be on mounted on the red Board · Identify the authority (one job title) responsible for issuing a Subway / SRT Red Top Notice · Just as document control is applied to the Subway / SRT Rule Book, i.e., a sign-off to indicate receipt and understanding of the information presented · Sequentially number and date the Red Top Notice [NOTE: Individuals have stated that such is the expected form; however, there being no descriptive process defined, such errors are accepted.] · Specify that a Red Top Notice may only be cancelled and removed from the Red Top Notice Board by another Red Top Notice · Issue a comprehensive Red Top Notice cancelling each of the preceding Red Top Notices when all the information contained in the Red Top Notices has been included in the next printed revision of the Subway / SRT Rule Book | | Red Top notices for changes to the SRB is being scrapped. BLUE TOP NOTICES are being introduced in July 2015 which will only provide additions, deletions, clarifications etc to the SRB and will only be issued to TTC employees and Contractors trained and in possession of an SRB. | 31/07/2015 | M. Palmer, DCOO | | |

Training

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|-------|--|--|--|------------|--|--|-----------|
| 16/14 | Subway / SRT Rule Book Refresher / Requalification Training is said to be an annual occurrence. However, there has been a 6 month Grace Period permitted. The frequency and content of the Rule Book Requalification is the responsibility of the Manager – Training Department (by Rule – Appendix B, TTC Policy / Instruction, Procedure B.5.0.9) and not determined by the Management Teams of those employees who require the requalification. APTA recommends efforts be made to establish the warranted frequency of requalification and adhere to that frequency | | The established practice is 1 year with a 6 month grace period (18 months) & must be enforced by all Department Heads. | N/A | J. DiBiase, Head of Training and Development | | 6/18/2015 |
| 16/15 | There is no "advanced" training provided for those required to set up work zones or providing protection as watchman (related to section 6 of the TTC Subway / SRT Rule Book 2011). Although for those who have particular technical responsibilities, for example, work on the conductor rail, the training for the role does include more training on setting up worksites. But this is not required, as such, to set up a work site. It was noted by an employee (although 5 years ago) that after only 3 weeks at work with the TTC, he was put in charge of providing a safety for a college placement student in the live track environment. The On-the-Job Training (OJT) that does occur is not documented in any manner. APTA recommends adopting industry On Track Safety standards. | | A Track Level Safety Steering Committee has been established & is being led by Mike Palmer, DCOO. Training & Development is part of this Committee. Work is underway in to develop & deliver competency based training based on roles & responsibilities while at track level. | 31/12/2015 | J. DiBiase, Head of Training and Development in conjunction with Mike Palmer, DCOO | | |

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| 16/17 | A documented OJT program that includes at least three aspects, including (but may not be limited to), a documented checklist of pre-requisites (up-to-date track level certification, appropriate PPE, the currency of any license / certification, etc.), a documented checklist of safety and mission-critical tasks and a designation of the minimum total number of hours / repetitions deemed necessary to become proficient. Such documentation should be cumulative, with sign-offs as to progress and tracking the number of hours / activities accomplished under the tutelage of the mentor / "student" and finally a statement indicating that the individual's superior and the individual agree that the requirements have been satisfied and proficiency has been attained. APTA recommends that any OJT associated with safety critical tasks be properly documented. | | As outlined in 16/15, training will be based on competencies. On the job assessments will be developed for a select group of employees to assess. | 31/12/2015 | J. DiBiase, Head of Training and Development in conjunction with Mike Palmer, DCOO | | |
| 16/18 | Track Level training is centered on the Subway / SRT Rule Book and comprises 2 days initial training and 1 day refresher training each year, except for Office staff, which may complete the 1 day refresher by use of an on-line Computer-based Training Program in approximately two hours. Office staff personnel are more vulnerable, not less, unless other mitigating measures are put in place. APTA recommends that industry standards be adopted. [NOTE: The review team was informed that this practice was eliminated by a phone call / text message during the exit conference.] | | All SRB training is conducted through classroom training only. | N/A | J. DiBiase, Head of Training and Development | | 11/24/2014 |
| 16/23 | Training and qualification for rules seemed to be over simplified. The auditors were informed that everyone goes through a 2-day training qualification program. For example, there is no intensive training for people assuming supervisory / protection roles being considered although most of the staff are familiar with FAMES reports that nearly 50% of all track worker fatalities occur to the employee in charge of the safety onsite. APTA recommends that the TTC review training and qualification process to ensure competency for the respective safety critical roles and responsibilities. Although management discussion have been ongoing over the past few months between Operations and Training, it is further suggested that formal liaison be established between Training and the end user departments in the training program development and focus of the initial and requalification training programs. | | See 16/15 above. | 31/12/2015 | J. DiBiase, Head of Training and Development in conjunction with Mike Palmer, DCOO | | |

Transit Enforcement Unit

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|---------------------------------|--|--|---|------------|---|--|--|
| security - effective practice 2 | TTC was utilizing an "INCREASED VIGILANCE - OBSERVE AND REPORT" program which is identified in the <i>Corporate Security Escalation Plan, 2009</i> . This program is similar to "See Something, Say Something", a commonly used and highly effective security best practice which encourages employee and customer vigilance, reporting and further secures the system. APTA acknowledges that TTC was utilizing this program and recommends TTC include it in the System Security Plan. (16.1) | | This will be reviewed during the development of the Corporate Security Management program (CSMP) | 31/12/2015 | M. Cousins, Head TEU & Ryan Duggan, Manger Fire Safety and Emergency Planning | | |
| security - action needed 1 | APTA recommends the Transit Enforcement Unit (TEU) develop a System Security Plan (SSP) to establish a transit policing philosophy and holistic Security Program to re-establish the security program within TTC after the redeployment in 2011. Senior management should review, approve and endorse the plan (which is similar in format to the System Safety Program Plan) to confirm TTC's commitment to providing a safe, secure and reliable transit system. This plan is necessary for clarifying the security philosophy of TTC, implementing it within the security program and providing strategic resources to adequately perform this critical service. (1.1) | | A Corporate Security Management Program (CSMP) is being developed and will be submitted in Q4 2015. This will replace the former SSP. | 31/12/2015 | M. Cousins, Head TEU & Ryan Duggan, Manger Fire Safety and Emergency Planning | | |

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| security - action needed 2 | APTA recommends, in addition to the SSP, the TEU should also begin updating other necessary security specific plans including Security Escalation Plan and Security and Emergency Preparedness Plan (SEPP) and work with the appropriate TTC departments to develop a Continuity of Operations Plan (COOP). (14.1) | | Security Escalation Plan and Framework Document, System Security Program have been updated. | 09/06/2015 | M. Cousins, Head TEU & Ryan Duggan, Manger Fire Safety and Emergency Planning | | |
| security - action needed 5 | The TEU currently reports to the Chief Service Officer. In many instances, members of the TEU are utilized as customer service representatives instead of true security experts and Special Constables who are inadvertently assisting with Operations related functions instead of dedicated security related duties. APTA recommends that the TEU focus on security related duties, responsibilities. (5.2) | | <p>The TEU is using Customer Service as a core value while providing security services. We do not believe that you have to perform either Security functions OR Customer Service functions. Our belief is that by focusing on Customer Service while performing our Security functions (general patrol, directed patrol, order maintenance, etc.) we are providing a valuable service to the TTC. It is further believed, that by having Transit Enforcement report through the Chief Service Officer, Transit Enforcement is uniquely positioned to respond to issues that arise through customer facing departments.</p> <p>A great example of this model is our Station Management Model; a visible presence in stations is a deterrent measure in addressing security needs. All 69 Stations have staff assigned from different disciplines, with TEU staffing the critical peak times and locations creating the greatest visibility and deterrent effect possible. This Station Management Model leads to a reduction in crime, a more positive relationship between Security and frontline employees, and greater crime prevention through visibility. It creates a larger team of employees who can Deter, Detect, Delay, and Deny threats.</p> | N/A | R. Leary, Chief Service Officer and Andy Byford, CEO | | |

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| security - action needed 6 | APTA recommends the TEU strengthen partnerships with Special Constables, external stakeholders and continue to elevate the Security Working Group, which benefits all stakeholders. (14.3) | | TEU continues to strengthen its relationship with TPS; the TEU has started monthly meetings with the TPS Transit Patrol Unit and joint campaigns are being prepared which will strengthen the relationship and increase visibility on the system. The TEU has a position within the TPS Major Incident Command Centre (MICC) during the Pan Am games which speaks to the relationship. Additionally, the Transit Security Working Group is working on being a recognized committee through CUTA and the TTC Head of Transit Enforcement is also now a member of the U.S. Department of Homeland Security Transportation Security Administration Peer Advisor Group, as well as a committee member on APTA's Committee on Public Safety, Security Standards Policy and Planning Committee, Security Affairs Committee, Bus Safety Committee, and Rail Safety Committee. | Ongoing | M. Cousins, Head TEU | | 6/23/2015 |

APTA Suggests

General / Corporate Safety

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| General/2 | The 5 year Corporate Plan establishes a clear vision for the agency and the value and importance of safety in achieving that mission. The roles and responsibilities for carrying out the safety portion of the business plan seem to be confused. Some of the duties overlap and in some cases there is a gap in ownership or a hesitancy to act on it – is it corporate or departmental? Many times we heard a program referred to as “that’s a corporate safety program” or “that’s one of our programs” based on where it originated. Almost as if these programs were separate and independent of each other. Clearly there is a lack of vision or ownership that is preventing staff from understanding that there is only one TTC safety plan to which all of these efforts and programs are an integral part of and roll up to. APTA suggests development of graphics and training on Safety Management Systems that display the interconnectivity of programs and departments in leading or supporting safety functions across the organization which will allow staff to “connect” or “visualize” their contribution to the overall effort. | | Corporate training has been updated to reflect SMS content. However, training and communication of the TTC SHE Management System and its relationship to departments will be evaluated and a strategy developed to enhance understanding. | 30/09/2016 | B. Hasserjian, Manager SH&E Policy & Strategy, S&E | | |
| General/3 | The review team found many programs and practices that were quite good and even several of them tagged as “Industry Leading Effective Practices”. We also found that most of these had value in other areas and departments of the organization but were unknown to those areas and departments. The safety consultants embedded within the departments began a voluntary and informal weekly meeting in which they discovered and shared knowledge of these isolated “best practices” and have seen value in transferring this information into their respective departments. Steps are in place to formalize these meetings and mine down for additional information that will be useful across the organization. APTA finds this to be a good direction and start but suggests that additional opportunities be created to collaborate and share approaches to safety programs and practices both within the TTC and by networking with other transit agencies or industries. | | The large group of Safety Consultants meet in smaller groups to engage in more detailed discussions about safety efforts. Meetings between the Safety Consultants and the Engineering Department and Safety are held on a regular basis. The TTC will continue to send representatives to other transit agencies for safety information sharing on a regular basis and consider including Safety Consultants on these efforts. | N/A | Scott Cameron, Senior Safety Consultant, S&E | | 6/1/2015 |
| 1/6 | Although there are documents, e.g., the SH&E Management System <i>Corporate Procedure – SH&E Legal and Other Requirements</i> that are under development at the time of the review, progress is being made and tracked (document-by-document) on a Gantt chart that demonstrates the commitment to complete and monitor progress. The process should continue as planned and APTA suggests that charts be prominently displayed at all locations to demonstrate the progress being made using graphics that indicate the relationships to each other rather than isolated to a single task or to a single department. | | All stakeholders with responsibility for developing, commenting on, approving and implementing SH&E elements are apprised of progress. The effort needed to maintain notice boards in all locations is not trivial and is not warranted by the benefit. | N/A | J. O’Grady, CSO | | 6/18/2015 |

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| 3/5 | Departmental staff have stated that corporate programs were not well understood or well received as they were perceived to be from the top down with little engagement from those ultimately responsible for implementation. As a result, some of these programs were seen as not having value when in fact they did. APTA suggests that the TTC evaluate how it engages departmental stakeholders in the development and implementation of corporate driven safety programs and develop not only guidance, but also the resources (such as databases) to support a more efficient process. This suggestion applies to engagement of the departmental stakeholders during the rollout of the SMS program. A comprehensive development and phase-in process would consider the development and implementation of these elements, not only for content purposes, but also design and resources for system wide implementation, particularly looking at uniformity of data quality, collection and tracking. This would help address comments from the departments concerning the differences between their inspection criteria and corporate inspection criteria as related to bus pre-trip inspection as one example. | | At their August 2014 meeting the SX Committee adopted a new Corporate Procedure on the Development of SH&E Policies and Programs. This procedure lays out an explicit program of engagement by safety consultants, department heads and other stakeholders at all points in the development process. The procedure requires a detailed implementation plan including templates and databases as appropriate | N/A | J. O'Grady, CSO | | 8/12/2014 |
| 3/6 | The TTC has been proactive in its goal to expand employee engagement throughout the organization. The visits by the CEO were perceived to be a good start and were welcomed. Staff articulated that this was the first time something like that had happened. In addition, other opportunities to connect with staff were suggested such as re-issuing the in-house <i>Coupler</i> magazine in paper copy to increase engagement opportunity with all employees. The "hidden message" here may be that there is an electronic literacy or accessibility issue with employees or that the Coupler magazine serves a greater communication function in paper than previously considered. APTA suggests TTC stratify communication methods, survey the effectiveness of each method (accessing literacy, language, content, etc.) in support of the staff's suggestion as opportunity to expand ways to engage the employees. | | The TTC uses a number of vehicles to communicate directly with employees. The Coupler print edition was replaced with a website, but the TTC has also invested in narrowcasting – TTC-TV – a series of large screen TVs strategically placed across the property in common areas used to communicate in real-time with the workforce. The TTC is also actively pursuing other engagement opportunities with the workforce, including ongoing and regular team meetings – face-to-face meetings – designed to address information-sharing, following the employee engagement survey results. | N/A | B. Ross, Director Strategic Communication | | 6/22/2015 |
| 4/3 | The TTC has been in the practice of developing goals for many years. However, in the past there was little evidence that a goal was a target, which was made or missed as a course of doing business. Evidence exists that some areas of the Commission understand that goals cannot be achieved without establishing a cohesive plan, implementing the plan, evaluating the plan and amending the plan after the results of the plan are available, e.g., the Bus Operator Assault Committee's plan. Plans do need to be created so that success can be measured; absent a plan a goal is subject to random chance to be successful. APTA suggests establishing expectations for both setting and achieving goals. | | A new element in the SHE Management System to establish a formal and mandatory process for setting SHE Goals and Objectives is now in the comment and approval process. This process will begin in November 2015 and lead into the 2016 budget planning cycle. | 30/04/2016 | J. O'Grady, CSO | | |

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| 5/5 | The various maintenance department heads have established a reliability, accountability, maintainability and safety (RAMS) group to support their department's productivity efforts. This group is currently establishing guidelines for document control within the maintenance groups. For documents to be reviewed for a change initiated by a shop, the RAMS group leads the effort for the Rail Cars & Shops Department, in collaboration with the department's imbedded safety consultant. In this respect, the change management practices for Rail Cars & Shops differ from that of other departments. RAMS is a maintenance strategy that is unique to this department. APTA suggests TTC investigate the benefits of installing a RAMS concept on a corporate level. | | RAMS is an essential function for the success of Rolling Stock Asset Life cycle maintenance Strategies and methodologies, it should feed into a Corporate level Asset Management Enterprise system. Other Departments have and are considering adapting this model. Bus Maintenance does have a similar structure called Technical Services. SI is considering a RAMS model in the near future. | N/A | G. Shortt, COO (R. Trentadue) | | 6/30/2015 |
| 6/3 | The development of local and corporate safety initiatives is clearly not integrated and a "push and pull" approach prevails to decide what gets done. APTA suggests an overall HSE improvement program should be developed and priorities defined "up front" with discussions with line staff with the usual planning contingency allowed for unexpected activity. | | A new element in the SHE Management System to establish a formal and mandatory process for setting SHE Goals and Objectives is now in the comment and approval process. A Management Review Process of the SHE Management System at both the corporate and department levels to identify priorities for setting SHE Goals and Objectives will be launched in November 2015. | 30/11/206 | B. Hasserjian, Manager SH&E Policy & Strategy, S&E | | |
| 9/3 | A monthly statistical report ("Report on Key Performance Indicators (KPIs)") is produced for the SX committee. This is a 60-plus page document, with an Agenda Time Allocation of 10 Minutes. It is suggested that the report is reduced in length / summarized by priority for the committee, or that reporting is "by exception" to show only those issues that need resolution. It was noted that the statistics presented do not make use of "control charts" to show statistical significance of trends of particular items, e.g., Lost Time Injuries. The risk here is that the SX Committee may focus on issues that statistically are not issues at all. APTA suggests the monthly report introduces the use of Control Charts where appropriate to better inform the Committee of statistically significant trends in HSE performance. | | An evaluation of the SX KPI report is currently planned in order to improve the report for SX Committee use. The use of control charts will be included in this evaluation. | 31/03/2016 | B. Hasserjian, Manager SH&E Policy & Strategy, S&E | | |

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| 9/4 | The statistics presented at SX Committee do not show asset-related data, e.g., rail breaks, slow orders, etc. It is possible that TTC does not experience frequent asset problems that impact service. However, if such was the case and the monthly report focused the "exceptions," then APTA suggests asset-related data be "tracked" but not to interfere with what is being reported as an existing KPI. | | The suggestion to present asset related data at the SX Committee has been reviewed. Each maintenance department in the Operations Group has full responsibility for their respective assets. They have their own departmental asset related KPI's for tracking asset performance. The high quantity and variety of assets are managed and tracked at the departmental level. Fleet plans and other critical equipment maintenance programs are reviewed at the Executive level through the Assets & Growth Executive Committee. | N/A | G. Shortt, COO | | 8/7/2015 |
| 9/6 | Visualization Boards were observed in the Executive Building that demonstrated current and recent KPI performance. Similar KPI tracking can be found on bulletin boards, in offices and hallways, based on what each department has identified as within their areas of influence. Consequently, there are a lot of KPIs being tracked ("We're swimming in KPIs") and the priorities that each may receive may be viewed differently across the levels of employees and management. Communication is enhanced when the ones being informed can see the progress being made. APTA suggests that consideration is given to mapping out current use of KPIs and developing a visual display for all message boards that are common core performance areas showing progress against goal and the relationship they have to department performance. | | Work is underway to quantify the number and type of corporate KPIs as well as the number and type of local KPIs. Some of these local KPIs support corporate KPIs others exist to track locally important business unit metrics whilst others till are relics. Although APTA auditors may have heard that "we are swimming in KPIs" there are only about 20 KPIs tracked at the corporate level so others are the result of those business units using them for their own purposes. | 01/10/2015 | C. Upfold, CCO | | |
| 9/7 | The implementation plan for the development and roll-out of the SMS remains in a draft form; partly because agreement has not been reached with the delivery departments on "what" they need to do "by when." Resolution is needed before a credible plan can be implemented. The roll-out is being accomplished in an "opportunistic" manner, i.e., "every six months - roll out a bit more," according to what is perceived as able to be handled. APTA suggests a collaborative planning process be implemented that can assess and prioritize the strategic needs of the SMS balanced with the resources needed to be available in implementation. | | A new element in the SHE Management System to establish a formal and mandatory process for setting SHE Goals and Objectives is now in the comment and approval process. This process will begin in November 2015 with a new SHE Management System Review process and lead into the 2016 budget planning cycle. | 30/04/2016 | J. O'Grady, CSO | | |

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| 9/8 | Corporate Safety has gathered over 30 years of paper industrial health and safety records and testing data for the respective facilities. There is no database available for tracking and analysis by job code or other measurement. These records could be valuable in supporting ongoing industrial health and safety management efforts even if only 5 or 10 years of data was available. APTA suggests TTC evaluate system opportunities to address this need. | | See response to Recommendation General 1. This effort would be part of Phase 2. | 30/04/2017 | J. O'Grady, CSO | | |
| 10/4 | Generally, overarching change management and document control tools are not applied across the Commission. Change management of the corporate SMS is not done through a formal change management process, but is consulted upon. The same applies to lower level SMS materials. This is inefficient and tends to rely on extensive consultation to reach consensus. It creates a kind of "anarchic democracy," where everyone's vote carries the same weight. Governance and change management of the SMS at all levels should be through defined processes, of which consultation has value, but has single points of accountability for decision making. APTA suggests a formal change management process be developed at the corporate level. | | The CEO has mandated the creation of a formal change management office. Budgeted positions identified and team recruitment under way. | | A. Byford, CEO | | 7/9/2015 |
| 10/6 | Controlled Documents usually have a requirement that such documents are to be reviewed / revised as warranted at a specified frequency and the frequency is stated as a part of the document. The "Hazardous Materials Control Program" (Rev #: 00, dated March 12, 2007) contains no such statement and, therefore no apparent reason to be reviewed / revised. APTA suggests the next revision of the Program: <ul style="list-style-type: none"> · Adds language that specifies the frequency of the Program's frequency of review / revision · Is updated to specify all aspects of the Global Harmonization System (GHS), especially the training requirements, as full implementation was to have been completed. | | The Corporate Hazardous Materials Control Program is currently being reviewed and updated as part of the update to the SHE Management System to reflect GHS requirements. Document control language will be incorporated into this and all future SH&E elements. | 08/12/2015 | M. Langdon, Manager Occupational Hygiene & Environment, S&E | | |
| | | | The deadline for full implementation of GHS in Canada is December 1, 2018. The Ontario Ministry of Labour has not issued interim deadlines as yet. | 01/12/2018 | M. Langdon, Manager Occupational Hygiene & Environment, S&E | | |
| 10/8 | Change control of the system modification process is more mature within capital programs than at the local departmental levels. In discussions with staff, a process for proposing, assessing, approving, implementing and monitoring system modification was established but not formalized. APTA suggests that Corporate Safety liaison between Capital Programs and with affected departments to formalize this change control / modification process at a corporate level. | | A System Safety Review policy has been in place for many years and processes approximately 600 changes annually. This program was formally readopted as part of the SH&E Assurance Program by the SX committee at their June 2015 meeting. In addition, the CEO has mandated the creation of a formal change management office. | 15/12/2015 | A. Byford, CEO | | 7/9/2015 |

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| 10/10 | No corporate template for safety SOPs currently exists. Rather, they are driven by each department independently which is a challenge when organizational structures change. APTA has previously recommended a corporate document control policy be developed, and suggests that an electronic document control policy be considered the most practical way of doing so. In addition to establishing a basic template for the standard issuance and control of SOPs, the document control policy should direct the following actions: a. developing a list of all safety/security critical documents to be managed; b. assigning an owner of each document; c. developing a review interval for each document; d. create a review process (committee, panel, individual, etc.); e. signatory requirements; f. distribution of each document and; g. selecting a manager of document control who will manage the process ensuring consistency and timeliness. | | Management acknowledges that there is no corporate standard for any type of SOP, however, for safety SOPs the minimum standard is specified in the Corporate documentation. As noted in Item 10/13, these will now be reviewed by Safety and Environment Department to ensure consistency. Most departments have developed a set of SOPs to manage their entire operation and singling out safety SOPs for a special format is not practical. | N/A | J. O'Grady, CSO | | 6/18/2015 |
| 10/11 | No current executive level configuration management committee exists. Each department is left on their own to understand and design their configuration management process. The Capital Project department has a very robust and extremely sophisticated configuration management process in place. The TTC would benefit greatly if the capital projects configuration practices could be used as a model and trained to the appropriate departments. APTA suggests TTC consider chartering such a committee to guide the configuration management process consistently across all departments. | | Will be forwarded to the FAX Committee. | | Finance and Administration Executive Committee | | 7/9/2015 |
| 10/12 | The decision to route all provincially required utility and infrastructure locating requests through internal resources, has put a strain on multiple already-taxed departments within the organization, including those with safety critical work assignments where fatigue can be an issue on key functions and teams. Reportedly, the electrical engineering unit receives on average 60 calls for service per day, while the tunnels/infrastructure unit tasked with receiving calls receives over 100 per day. As many calls result in site verification and engineering services by units within the Engineering, Construction & Expansion Department as well, the procedural issue is having a widespread, adverse effect. APTA suggests TTC conduct an analysis of the workload and resource effects and take appropriate action, to ensure these resources do not adversely impact safety critical functions. | | Current levels are manageable. ECE will continue to monitor One Call support workload and adjust staffing to respond to this legislated program without affecting other safety critical functions. | N/A | P. Laurin A/Head Engineering ECE | | 6/17/2015 |

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| 10/14 | As a safety initiative of the department, ECE has begun re-writing all departmental procedures and retraining all affected employees on the changes. From a configuration management standpoint, while it certainly commendable that such an effort is underway, the lack of a coordinated review by the corporate safety department throughout this process is of concern to the panel. The effort is department-driven. APTA suggests any large-scale efforts to drastically refresh or revise whole department SOPs or policies be reviewed by a corporate safety unit, to ensure the effort does not adversely affect the safety basis of other procedures, and to manage any document control processes effectively. | | <p>Review to manage safety sensitive documentation is currently in-place as part of the System Safety Review process managed by Corporate Safety. This is part of the corporate Safety Health Environment Assurance Program.</p> <p>ECE has committed to reviewing and updating all of its current procedures including safety procedures. This was required as there had not been an ongoing review program. ECE is in a unique position as most of its mandate is construction as opposed to industrial as defined by the Ontario Health and Safety Act. TTC's corporate procedures deal primarily with industrial safety. When updating or creating a new procedure ECE starts with existing corporate procedures. These are then modified to apply to ECE's construction activities. Where no corporate procedure exists ECE develops its own. ECE has no concern with Corporate Safety reviewing any procedures.</p> | N/A | <p>A. McKinnon, Manager Safety Engineering Services, S&E</p> <p>M. Nieznalski Manager - Safety & Security V. Schiralli Coordinator - Analysis and Procedures ECE</p> | | 5/15/2015 |
| 11/2 | Presently there is a form on the Finance Department webpage incorporates Safety certification budgetary requirements into the overall budget process for capital projects. There is a whole section in the existing SSP that covers the requirements for Safety Certification and this section is being transitioned into the new SMS but no formal policy or plan exists currently at the corporate level with over one hundred projects in process, APTA suggests a safety certification policy be implemented and that it is applied consistently, led by the corporate safety department. | | As part of the efforts to improve the Corporate Standard – Safety Certification, the need for a policy will be examined following the certification of numerous projects over 2015/6/7. | 30/12/2017 | A. McKinnon, Manager Safety Engineering Services, S&E | | |

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| 13/7 | For System Safety Reviews (SSRs), technical drawings are submitted to all stakeholders, including corporate safety. Sign-offs are obtained before the drawing is returned to the submitting party. However, in many cases, the process is driven by the “tenant”. The process does not have a controlled, centralized “corporate” owner, but rather it is maintained and “owned” by the individual department requesting the engineered change. APTA suggests the corporate safety department serve as the centralized point of access for the system safety review process and that in consultation with stakeholders, it determines which parties need to approve the document and those who should be in the review loop before it is approved at a corporate level. | | The System Safety Review process is owned by Corporate Safety. Part of Corporate Safety's review is to identify any individuals or groups who should be included in the sign-off process. A new Safety, Health and Environment Assurance Program highlights the responsibilities of the "tenant" and increase the visibility of the process. It is the responsibility and due diligence of the "tenants" to provide appropriate documentation to Corporate Safety for review. | N/A | | | 4/20/2015 |
| 18/26 | The Health, Safety and Environment Department’s intranet site is well-constructed with all of the corporate Safety information housed therein. However, HS&E does not “own” or manage other Intranet Sites, which can lead to difficulty finding “safety-specific” information by having to access a number of different locations to obtain the desired safety information. APTA suggests linking safety documents to enable search and retrieval. | | This process is already underway with the introduction of Sharepoint. | N/A | B. Hasserjian, Manager SH&E Policy & Strategy, S&E | | 5/15/2015 |
| 19/12 | In conjunction with the efforts led by the Risk Assessment group, the ECE department is developing and adopting a Quality Management System (QMS) approach. The QMS is a process that is insular and unique to the ECE department. Given the organizational implications of instituting a large-scale management system, approximately during the same time period as the adoption of a Safety Health & Environment Management System (led by the corporate safety department), and the high likelihood that certain functions within the organization may have roles and responsibilities in both systems, a concerted effort—from the top down and “bottom up” should be made to actively plan the co-implementation of both systems. Roles and responsibilities, whether shared by both systems or distinct, in all areas must be clearly defined, with buy-in from the stakeholders and departments to be affected. APTA suggests strategic planning efforts be initiated within TTC. The QMC mentioned above and the RAMS initiative in maintenance it is obvious that departments are taking on responsibility themselves. | | ECE has implemented a Quality Management System to ensure that current procedures are being followed. This also allows improvements to procedures. This systemic review includes all ECE internal procedures not just safety procedures. There is a very limited overlap with the Risk Assessment initiative and ECE will work with the Principal Risk advisor to ensure clearly delineated roles between the two initiatives. | N/A | H. Yip-Nielsen Director - Risk Analysis & Quality Assurance ECE | | 7/15/2015 |

Bus Transportation

TTC Response to 2014 APTA Safety Initiative Report

| Element / Item # | Finding | TTC Accept or Reject | Safety Improvement Initiative / Rationale for Rejection | Date Due (dd/mm/yyyy) | Individual Responsible (Position and Dept if applicable) | Status | Closed Date (dd/mm/yyyy) |
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| 12/12 | As part of ongoing "Route Checks" supervisors target their observation of route performance based on informal trend analysis of complaints or newly reported hazards. There are no formal plans or procedures dictating this practice. APTA suggests the Bus Transportation Department further enhances this program by establishing formal procedures which direct the coordination between ongoing hazard analysis with the QA/QC audits / inspections being performed by front-line Supervisors. | | A formal procedure will be created which will encompass frequency, methods and coordination between QA/QC audits and Bus Trans Supervisors. Route Checks will be based on QA/QC reporting and recommendations, trends within Bus Trans, hazard reporting, customer complaints and hot spots/routes. | 31/12/2015 | K. Watson, Head of Bus Transportation | | |
| 16/13 | Recertification training for Bus Operators currently consists of 3 days every 5 years. The Department is currently considering decreasing the interval as a program enhancement. APTA suggests the Bus Transportation Department continue its efforts to transition to a cycle of one to two days, and an interval of no more than two years. | | Provisions are being made in the 2016 Operating budget to provide 3 days of Bus Recertification training every 3 years. | 01/01/2016 | J. DiBiase, Head Training and Development | | |

Corporate Communications

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| 21/17 | To locate safety and security information on the TTC web page viewers must go to "Riding the TTC", then to the "Frequently asked questions" section and click on the last item on the list "Safety". From there a page opens with a section titled "How do I learn more about TTC safety". The reader can then open the next page which provides some detailed information. To further demonstrate TTC's commitment to the safety and security of its customers APTA suggests the home page provide a direct link to Safety and Security and that the information provided there be thorough and complete. | | The safety information on the TTC's website is current. It was revamped and updated in the spring of 2015. We do agree that this information is difficult to find in its current location. We will relocate the link to the home page to provide better access to this information for our customers. | 03/07/2015 | B. Ross, Director Strategic Communications | | |
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Human Resources

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| 16/25 | A recognized vulnerability of the ECE department, as well as many other departments within TTC, lies in the workforce effects anticipated as part of the upcoming directed change to the organization's pension plan. As a result of the change, a wave of employees are expected to retire in from many departments. In some cases new specialized staff positions have been created to actively plan succession, while other departments have developed working groups or committees to assist management. The Materials & Procurement group has asked senior managers to contribute to the creation of an on-the-job training program based on their own expertise, skills, and their respective roles and responsibilities. APTA suggests TTC consider a consolidated plan for assessing vulnerable sections of the organization and evaluating means of addressing the vulnerabilities. | | The issue of identifying critical roles has already been underway. Coupled with the implementation of the succession plan will address this concern. It is anticipated that the plan will be implemented early 2016. | early 2016 | G. Piemontese, Chief People Officer | | |
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| 20/9 | As noted above, the Materials & Procurement department has initiated a number of excellent management practices which the entire organization could put to good use in their respective areas. Another excellent example that M&P championed was found in the succession planning practice. Senior managers were asked to help create customized, job-specific e-learning modules intended to train and re-train fellow employees, based on their own roles and responsibilities, lessons learned, and experience gained over the years. The modules will be used long after the senior managers involved retire from the TTC. While APTA commends all of these innovative programs, they all could stand to have increased focus brought to bear on safety critical functions. This would build the expectation that safety is an integral part of the way business is done. APTA suggests incorporating safety and security functions into the succession planning effort. | ○ ● | The succession plan & employee development will incorporate safety & security functions. | early 2016 | G. Piemontese, Chief People Officer | | |

Information Technology

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| 10/15 | During the meeting with the Human Resources Department, the review team questioned the previously-received information that the Subway Infrastructure Department had two hundred (200) vacant positions. The Human Resources Team indicated that such was quite possible and that the actual veracity of the statement would be very time-consuming to answer because, while a single-database of TTC positions, both vacant and filled, does exist, it is not maintained on a regular basis outside of the once-per-annum budget process, and it does not exist in a format that lends itself to reporting in a modern, manageable Excel format. The review team was informed that the I.T. department, in tandem with Finance and HR, has a budgeted plan to implement a Management Information System which will, among other functions, effectively track vacancies. In the meantime, as a separate project, HR is working with I.T to develop electronic org charts that will be updated regularly, and fed from a manually updated database reflecting all TTC positions, both filled, and vacant. Once the MIS system is in place, it can be used for source data for these org charts. APTA suggests the completion of such projects, especially if they will aide in the tracking and reporting of vacancies, so that management is able to more effectively plan and manage positions, including making more informed decisions about which vacancies to fill, and when, as well as when to seek approval for additional headcount. | | Both tasks have been combined and are complete. | N/A | A. Iannucci, Head ITS | | 3/18/2015 |
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Rail Cars & Shops

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| 10/7 | Review of the Wilson Car house "Inspection Gauge Check Sheet" (702-777-02, Rev 0 in the Header) with a "Revision Date: May 01, 2014" in the Footer) that indicates being completed October 30, 2014 shows "Required Calibration Frequency" of ten (10) items showing a 12 month cycle that are written over with a "6." Documents specifying "Rev 0" but with a Revision Date and frequency requirements change by hand-written numbers is not considered acceptable practice. APTA suggests review of the procedure to determine if it needs to be improved or if training is less than adequate for those using the procedure. | | RAMS – procedure section has established a Document control Policy and have created templates that will address this issue. | 31/12/2015 | R. Trentadue, Head of Rail Cars and Shops | | |
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| 12/13 | The Rail Cars and Shops Department has created its Quality Control Program that specifies the management team's audit responsibilities predicated upon their perceived risks. The Program identifies (among other things), the "unmitigated risk" of each item, the average conformance rate of previous audits, the proposed target, the audit structure and frequency, resource requirements and interactions with other departments. The Quality Control Program reviewed by the review team noted the document is undated and references only previous Audit Averages from "2011 / 2012." The document indicates the Quality Control Program has not been implemented to-date in 2014, even though some of the checks are to be conducted quarterly. If fully implemented, such a risk control program could be quite effective. APTA suggests the Rail Cars and Shops Department consider re-activating the program for a prescribed timeframe in a modified configuration and monitor the results for effectiveness. | | Clarification – Program was never deactivated, affected by resource changes through the development of RAMS. A request for QA staff has been submitted in the 2016 budget process in order to accelerate the program. Currently utilizing front line technical staff (ET's) to assist with QA checks. Priorities for QA checks have been established, development plan for SOP and Standardize QA check-sheets are underway. Budget submission complete for new QA staff. | 31/12/2016 | R. Trentadue, Head of Rail Cars and Shops | | |
| 14/12 | Review of calibration records of the Wilson Car House for torque wrenches and gauges demonstrated lists that appeared to identify all such wrenches and gauges. However, the lists did not contain any indication of the last date / next date of calibration and, in addition, the list of gauges contained items, e.g., "Go.No.Go" gauges that contained no listing of the OEM, Model # or Serial #. Absent such identifiers indicates the lack of traceability. This was also verified by a November 12, 2014 memo from the Safety Engineering Services Department with a Calibration verification rating less than 85% conforming against the Standard Work Instruction (SWI) 702-777. APTA suggests that the calibration program needs to be improved. | | RAMS – procedure section has established a Document control Policy that will address this issue. | 31/12/2015 | R. Trentadue, Head of Rail Cars and Shops | | |

Risk Management

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| 7/8 | Awareness of the new Enterprise Risk Management system is not clear at the department level. Workshops are underway on a controlled rollout, however the lack of information sharing creates a risk to project success and the ERM department is not fully staffed to carry out the consultation based departmental rollout the plan is based on. APTA believes this is the right direction and the right approach but suggests reassessment of the time frame for implementation to provide some degree of urgency for implementation. | | Risk Management Office submitted a budget request to increase staff by 2 risk advisors. Safety consultants from all TTC departments have been trained on the new risk management process and ERM software. | 01/07/2016 | Mohamed Ismail, PRA, RMO, S&E | | 01/07/2016 |
| 22/4 | As the gauge of the TTC is wider than the standard railroad gauge, a third party contractor has not been able to conduct ultrasonic testing of the TTC rails. Ultrasonic testing is performed annually on foot by pushing a "Push-bike" device. In reality, it takes 18 months to complete the testing cycle. It is important to note that rail approaching bridges is ultrasonically tested on a quarterly basis, however, on the whole, the practices in place do not satisfy minimum industry standards. Technology can now provide for standard-gauge track operations to be tested for track geometry and ultrasonic testing by the same vehicle while travelling at more than 50 k / h. APTA suggests that weakness in testing methodology be made a part of the Corporate Risk Registry and evaluated using the new Enterprise Risk Management system. | | Weakness in track ultrasound testing methodology will be added to the risk register. | 06/11/2015 | Aleksandar Urosevic, Maintenance Engineering Manager, Subway Infrastructure | | |

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| Stations | | | | | | | |
| 21/15 | The Group Station Manager (Landlord) concept is being developed to address existing issues related to safety responsibility, e.g., fire safety, staff performance and competence. However, at the present time, there are an insufficient number of supervisors and the collectors are not designated to a specific supervisor. APTA suggests, with the projected number of supervisors expanding from the present 56 to approximately 300, the Stations Department can establish a dedicated Landlord – Supervisor – Collector relationship, that “teams” will become the reality, allowing for the establishment of safety and security “promotion” programs / campaigns for stakeholders served by the “Team.” | | Stations Department embraces the concept of dedicated teams supporting each station. Multi-disciplinary teams will include Supervisory, Janitorial, Transit Enforcement, and front line employees all engaged in work to maintain a consistently high level of customer service, safety, security, and system readiness. Note that the increased number of staff is subject to a number of factors and is not necessarily as specified in the APTA finding. | 01/01/2017 | C. Greenwood, Head of Stations Department | | |

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| Subway Operations | | | | | | | |
| 15/15 | Following an incident in 2008 a “blue light” Train Operator warning system has been instituted in Revenue Hours. The system has not yet been introduced in Non Revenue Hours, although the risks are similar. APTA suggests a hazard analysis be performed on both revenue and non-revenue operations to determine if the risk is being adequately addressed. | | This recommendation is partially accepted. The role of the blue night in non revenue hours including the cusp between revenue and non revenue hours continues to be discussed with a clear split of opinion. Resolution will be through a wider look at protection in non revenue hours and the transition between the two where the biggest risk is perceived to be. | 31/03/2016 | M. Palmer, DCOO | | |

Subway Transportation

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| 15/11 | <p>The section of the Subway / SRT Rule Book providing information related to “Operating Past Red Signals” specifies that a train that has “Keyed-by” (either automatically or manually) a Red Signal is to be operated at 15 km / h”...until your train passes the next less restrictive signal” and, “When the front of your vehicle has passed the next less restrictive signal, operate according to wayside signs and signals.” As the Red signal may have been caused by a break in the rail of the track circuits “protected” by that signal, APTA suggests that it is not a good practice to accelerate to the normal track speed when the front of the train passes the next signal, but rather when the rear of the train passes the next signal to protect against any part of a train being operated over a possible break in a rail at greater than 15 km / h.</p> | | <p>This recommendation is rejected. More needs to be understood on the risk perceived by APTA. A break in the rail may cause the following signal to remain at danger and not show a proceed aspect. There is a fundamental flaw in the assumption that rail breaks lead to a track circuit failure. Best practice from the UK and Europe shows that most rail breaks detected start as an internal crack which only propagates on the outside as the fatigue expands. Even when an external break is discovered, it is not always clean, and often the two sides of the break remains in contact. The DCOO would like a discussion with the author of this recommendation to understand it fully.</p> | N/A | M. Palmer, DCOO | | 6/30/2015 |

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| 15/14 | Rule 3.2.4 (Employee in Charge) states in part, "When leaving track level: 1. Ensure that no one in the crew is left behind..." APTA suggests adding reference to "and material" being left behind. Additionally, APTA suggests a Policy / Rule / Procedure to be added that requires the first train through the work zone(s) must operate Restricted Speed from Point A to Point B and report on the status of crew members / material left behind. | | This recommendation is not accepted. It is implied when a PIC checks in with TCC, that all members are accounted for that the track is safe with no materials left fouling gauge etc. It is acceptable for material to remain behind and safely stored at site. It is impractical and unnecessary for trains to sweep the area after every piece of work merely to check the area. This goes against best practise elsewhere in Europe and the UK where the onus is on the PIC to check the area, tools and people and that the area is clear / safe for trains to run. There are different rules for ATO railways on the use of a sweep train which do not apply to the TTC. That said, in the next rule book revision due in January 2016, an opportunity will be taken to clarify the role of the PIC at the handback to TCC at the end of the engineering work being carried out. | N/A | M. Palmer, DCOO | | 6/30/2015 |
| 15/17 | It was not clear to the review team as to why the Rule Book seemed not "applicable" to complex / multiple work zone requirements. APTA suggests that this gap be addressed with the next revision of the rule book. | | Shared workzones have been suspended after two near misses. A pilot programme with a new method of sharing a work zone is being trialed with its re-introduction scheduled for the fall of 2015. It will be formally issued as part of the 2016 rule book revision in January 2016 | 31/01/2016 | M. Palmer, DCOO | | |

Training

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| 16/16 | According to the TTC Policy / Instruction found in Appendix B of the Subway / SRT Rule Book (2011), Procedure B.5 0.10 ("Procedures") specifies, "...who successfully completes Rule Book qualification is given a current copy of the Rule Book and a certification card..." However, the practice of issuing certification cards to employees has ceased to exist. A negative implication is that an employee in the track area, operating a train, etc., is not be able to verify the status of qualification, if questioned. Given that supervisors / forepersons / managers may have a personal liability should an injury occur will find it impossible to determine qualification status on site. APTA suggests that the rules be reviewed for consistency of purpose. [NOTE: Such is not the case for trained contractors, who must be with a qualified TTC employee and are issued the certification card and a dated sticker to attach to their hard hat.] | | See 16/15, a card will be created as a rollout to the competency based track level training. | 31/12/2015 | J. DiBiase, Head of Training and Development in conjunction with Mike Palmer, DCOO. | | |
| 16/19 | There is a 6-month lead time for training to prepare for rules changes, which seemed too long in the opinion of the Review Team. APTA suggests developing an alternative process for quicker introduction of life-saving rules. | | Any changes through any notice is embedded in training immediately so the new rules are included in the training. However, formal changes are made as resources can be made available. | N/A | J. DiBiase, Head of Training and Development | | 6/18/2015 |
| 16/20 | Access to the Training Department's Training Database (Pathlore) is perceived by many Managers to not be "user-friendly," as they cannot personally obtain accurate lists of the qualification status of employees within their specific Department. APTA suggests efforts be made to educate Pathlore users on how to access information they need which would effectuate a more-positive attitude toward the accessibility of training records. | | ITS has hired a Consultant to assist in assisting with the Pathlore project. A resource to assist with training delivery is scheduled to start on July 2, 2015. | 01/06/2016 | J. DiBiase, Head of Training and Development in conjunction with ITS. | | |
| 16/21 | Although there is a one day rules refresher program established, there was no structured training program presented to the auditors as it applied to the briefing of staff on new rules changes. APTA suggests developing an alternative process for quicker introduction of rule changes. | | See 16/15. Training is being developed based on competencies required for the job, which will include an orientation to the Subway Rulebook. | 31/12/2015 | J. DiBiase, Head of Training and Development in conjunction with Mike Palmer, DCOO. | | |
| 16/22 | APTA was not made aware of any training need analysis (TNA) being performed associated with safety critical activities or major system changes (e.g. on track safety, new rolling stock and ATC technology). APTA suggests that the TTC conduct a TNA on its safety critical processes to ensure the training programs effectively address staff competency requirements. | | See 16/15. Training is being developed based on competencies required for the job. | 31/12/2015 | J. DiBiase, Head of Training and Development in conjunction with Mike Palmer, DCOO. | | |
| 16/24 | Each delivery unit has a variation on the procedure development/ risk assessment/ training certification/ assurance cycle. While each area will have different needs APTA suggests that consideration be given to introducing a fully-fledged competence management system in the larger areas such as Rail Maintenance, Train and Station Operations. | | See 16/15. Training is being developed based on competencies required for the job. | 31/12/2015 | J. DiBiase, Head of Training and Development in conjunction with Mike Palmer, DCOO. | | |

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| 18/18 | At the present time, there is no Posttraumatic Stress Disorder (PTSD) Response training for supervisors / TTC staff who have to respond to fatalities / incidents. APTA suggests that such training is provided pro-actively. | | The term PTSD ought to be replaced with "traumatic/serious events". PTSD is a diagnosis and not every event results in PTSD. Training will be developed which will be included in ERC, Streetcar & Subway Supervisor training through the Training & Development Department. HR will develop an e-learning module through the New Supervisors Program. | 01/03/2016 | G. Piemontese, Chief People Officer, J. DiBiase, Head of Training and Development | | |

Transit Enforcement Unit

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| security - action needed 3 | TTC is in the process of hiring 20 additional fare enforcement officers. As TTC converts to proof of payment for fare collection incrementally across the system, TTC will need many additional fare enforcement officers to support the lines when they fully convert to the Presto payment system. APTA auditors suggest as proof of payment verification is fully unveiled, TTC will need to evaluate the amount of manpower dedicated fare enforcement at least yearly to ensure adequate personal are applied throughout the system to verify payment of fares. (14.3) | | TEU has hired a Consultant to assist with the Fare Inspection program which will include determining best practices for staffing, deployment, and equipment. We currently have 60 Fare Inspectors with an additional 20 to be hired in 2016. At a minimum, we will annually review our staffing. | N/A | M. Cousins, Head Transit Enforcement Unit | | 6/23/2015 |
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| security - action needed 4 | TTC's security culture is severely lacking and does not appear to be embraced by all TTC senior management. APTA suggests that TTC consider improving the security culture and work toward strengthening the moral within the TEU. Local municipal police such as Toronto Police Department have several priorities which may not fully align (and may possibly conflict) with those of TTC. The Toronto Police Department is not integrated within the TTC system and is does not directly support the mission of TTC. TTC should rely upon "in house" Special Constables to additionally assist with the Toronto Police Department with policing the system, calls for service, critical events and emergencies. Additionally, Special Constables within TTC can be held accountable for their performance and interaction with the public, along with promoting TTC's mission, priorities. (6.2) | | <p>Exception is taken to the opening statement. The senior management team fully embraces the security culture. This is evident in the KPIs measured in the Security Executive meetings and the fact that the Head of Transit Enforcement sits on the committee and reports at every meeting to the senior management team regarding security related matters. It is further evidenced by the Head of Transit Enforcement being one of only 3 members of the TTC Threat Assessment Group along with the CEO and the Chief Safety Officer.</p> <p>TPS is integrated within the TTC through their Transit Patrol Unit (TPU) and each day the TEU and the TPU share deployment schedules and "Morning Reports" which provide the highlights of the last 24 hours. The TPU specifically, and the TPS generally, are now fully integrated in our response to planned and unplanned events regarding turn backs on the system and we now have monthly meetings with TPU as discussed above in Security Action Needed 6.</p> | N/A | M. Cousins, Head Transit Enforcement Unit | | 6/23/2015 |
| security - action needed 6 | APTA suggests TTC increase coordination with TPS to increase information sharing, collaboration and provide TTC access to crime data, transit related crime statistics. TTC will not be able to adequately determine preventive measure to address crime trends without the relevant data. (14.3) | | The TEU are within 30 days of selecting a new RMS. The TEU have been in ongoing conversations with TPS regarding information sharing and we are moving in a positive direction. | 01/08/2015 | M. Cousins, Head Transit Enforcement Unit | | |

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| security - action needed 7 | APTA was informed that a Threat and Vulnerability Assessment (TVA) was conducted on TTC in 2011, however several of the recommendations were not addressed or implemented. APTA auditors recommend TTC conduct a new TVA to identify additional risks, vulnerabilities which may have materialized since the last assessment with the expansion of the system and other considerations and system modifications. TTC should address the recommendations, create a timeline and work plan for implementing the recommendations to adequately secure the people, property on and around TTC. (7.2) | | As part of the Corporate Security Management Program, a TVA will be conducted in Q4 of 2015 with recommendations being reviewed monthly at the Security Executive meetings until all items have been addressed. A TVA will be conducted every 5 years to ensure continuous identification of new threats and vulnerabilities. | 31/12/2015 | M. Cousins, Head Transit Enforcement Unit & Ryan Duggan, Manager of Fire Safety and Emergency Planning | | |
| security - action needed 8 | APTA suggests that the TEU hire additional administrative staff to free up Special Constables so they can patrol the system, provide a visible deterrence to crime instead of performing administrative related tasks. (5.2) | | 4 contract Administrative Staff are currently being hired to relieve the administrative demand on Sworn Staff. | 01/08/2015 | M. Cousins, Head Transit Enforcement Unit | | |
| security - action needed 9 | TTC currently utilizes an in-house case preparation and reporting system. It is not a records management system (RMS) per se and offers limited search ability and intelligence capabilities. TEU is currently working with the TTC IT Department to move towards a modern RMS which may be integrated the TPS Versadex system. Organizational IT does not provide sufficient records management support to provide in-house intelligence at this time. This places TEU at a significant intelligence deficit which impacts the overall security awareness of TTC. APTA suggests TTC TEU correspond with Vancouver and other comparable transit systems and adopt similar industry leading best practices and utilize the tools, programs they have developed. (8.2) | | The TEU are within 30 days of selecting a new RMS. | 01/08/2015 | M. Cousins, Head Transit Enforcement Unit | | |
| security - action needed 10 | TEU estimates that Sexual Assaults are one of the largest unreported crimes on the system. Customers are often embarrassed to report offences for multiple reasons which makes it difficult to eliminate the crime from occurring. APTA suggests TTC address this crime and develop a sexual assault prevention campaign and utilize industry leading best practices in this area, including promoting "See Something-Say Something" campaigns and other customer awareness outreach programs that have been very well received by the general public and have assisted with reducing this crime. This should lead to an increase in the level of reported sexual crimes and the program will ultimately contribute to increasing awareness, encouraging vigilance which will further assist with preventing these crimes from occurring in the 1 st place. It is worth noting that these types of customer awareness programs have increased crime stats in other comparable transit agencies and may lead to inquiries regarding the increase of reports for this or similar type crimes. (16.1) | | TEU is working with TTC Corporate Communications and the TPS Sex Crimes Unit to create a joint campaign targeting personal space which includes Sexual Assault. | 31/12/2015 | M. Cousins, Head Transit Enforcement Unit | | |
| security - action needed 11 | APTA acknowledges TTCs current customer outreach initiatives and encourages TEU to further collaborate with other departments in promoting and enacting these programs. APTA encourages TTC to develop an "app" which to easily communicates with customers, encourages interaction which will address many of the unreported crimes with customers. TEU should work with the IT, safety and other relevant departments to address this issue. TTC would be well served by inquiring with the transit industry to consider the available options, best practices and which is appropriate for TTC. (16.1) | | TEU is currently working with TPS and App vendors to determine if TEU should have its own App or if we should be part of the TPS App. | 31/12/2015 | M. Cousins, Head Transit Enforcement Unit | | |