



## **Annual Review of TTC's Safety, Health & Environment Management System**

**Date:** June 17, 2020

**To:** TTC Board

### **Summary**

---

This item was considered by the TTC Audit & Risk Management Committee on June 3, 2020 and was adopted without amendments.

### **Contact**

---

Betty Hasserjian – Chief Safety Officer (Acting)  
416-393-4574  
betty.hasserjian@ttc.ca



## **Annual Review of TTC's Safety, Health & Environment Management System**

**Date:** June 3, 2020

**To:** Audit and Risk Management Committee

**From:** Chief Safety Officer (Acting)

### **Summary**

---

The TTC manages and mitigates occupational health and safety, operational safety and environmental risks due to our operations, activities and services in a systematic and consistent manner through the TTC's Safety, Health & Environment (SH&E) Management System. Over the past several years, the TTC has been developing and implementing a SH&E Management System to manage its occupational health and safety, operational safety and environmental risks. A SH&E Management System is a comprehensive and proactive approach to managing SH&E risk. The system goes beyond a simple sum of individual or isolated safety and environmental management programs and activities, such as investigation, inspection or training. It is designed to improve SH&E performance and reduce risk by integrating all its processes into a continuous improvement cycle of Plan-Do-Check-Act.

A review of the TTC's SH&E Management System is conducted by the Safety, Security and Environment (SX) Committee on an annual basis. The purpose of the annual review is to evaluate the effectiveness and adequacy of the SH&E Management System and to identify opportunities for continuous improvement, ensuring the ongoing management of SH&E risk.

The period between Q4 2018 to Q3 2019 was reviewed by the SX Committee in January 2020. The review was completed through analysis of: performance indicators; audit/assessment results; regulatory oversight; findings from other transit agencies; status of SH&E initiatives; and group/departmental management reviews. This involved both a top-down and a bottom-up review as detailed below.

This final report summarizes the results of the aforementioned review and was approved by the SX Committee in May 2020. It includes Opportunities for Improvement in the TTC's SH&E Management System and the 2020 to 2022 TTC Corporate SH&E Goals and Objectives.

## **Recommendations**

---

It is recommended that the Audit and Risk Management Committee:

1. Approve management's approach to continuously improving the effectiveness of the TTC's SH&E Management System, identifying priority SH&E issues, and developing corporate SH&E goals and objectives.
2. Receive this report, the Opportunities for Improvement and the 2020 to 2022 TTC Corporate SH&E Goals and Objectives.
3. Forward this report, the Opportunities for Improvement and the 2020 to 2022 TTC Corporate SH&E Goals and Objectives to the TTC Board for information.

## **Financial Summary**

---

The recommendations in this Report have no additional funding implications beyond the combined costs of the Safety and Environment Department that were included in the 2020 Operating Budget.

## **Equity/Accessibility Matters**

---

An effective and robust SH&E Management System is essential to the protection of vulnerable populations in the community, among customers and employees. This review is management's tool for ensuring continuous improvement.

## **Decision History**

---

The full report of the annual review, including the Opportunities for Improvement and the 2020 to 2022 TTC Corporate SH&E Goals and Objectives, have been approved by the SX Committee. We determined last year that this review would be presented annually to the Audit and Risk Management Committee and the TTC Board to provide members with information on the functioning of the TTC's SH&E Management System, which will help them fulfill their legislative duties as corporate directors.

## **Issue Background**

---

The TTC's SH&E Management System is built on the TTC's commitment to protect the environment and the safety and health of its workers, customers and the general public.

The SX Committee meets annually to review the SH&E Management System, to ensure its continuing suitability, adequacy and effectiveness. This review identifies opportunities for continuous improvement and evaluates how well the SH&E Management System is functioning in supporting the safety and security cornerstone of the TTC's Corporate Plan.

Under safety and environmental legislation, TTC Board members are considered directors of a corporation and have prescribed duties to take all reasonable care to ensure that the TTC complies with safety and environmental legislation and all regulatory orders. As such, they should be aware of the TTC's SH&E Management System and its performance.

## Comments

---

The information listed below summarizes the results from the analysis of the following inputs:

- Performance indicators;
- Audit/assessment results;
- Regulatory oversight;
- Status of SH&E initiatives; and
- Group/departmental management reviews.

### SH&E Performance

From the statistical analysis and moving annual comparison of SH&E performance data, the table below highlights the performance indicators where adverse trends were observed:

SH&E Performance Indicator	Identified Trends
<p><b>1. Occupational Lost-Time Injury Rate (LTIR) and No-Lost Time Injury Rate (NLTIR)</b></p>	<ul style="list-style-type: none"> <li>• The moving annual LTIR to the end of Q3 2019 is 5% higher than the corresponding rate to the end of Q3 2018. The moving annual NLTIR to the end of Q3 2019 is 7% lower than the corresponding rates to the end of Q3 2018.</li> <li>• Over the long-term period, from Q4 2014 to Q3 2019, a statistically significant upward trend is observed in both the LTIR and the NLTIR. The increase in LTIR since mid-2017 is mainly due to emotional trauma injuries. Also, when emotional trauma injuries are excluded, the NLTIR shows no statistically significant increase over the five-year period. To help address emotional trauma injuries, a Psychological Health and Safety Program will be developed in 2020/21 (See Goal 1-11 in Attachment 1). In addition to helping to prevent suicide by customers, the TTC's Suicide Prevention Program also helps to address the impact of suicide on TTC</li> </ul>

SH&E Performance Indicator	Identified Trends
	employees (See Status of SH&E Initiatives Section).
<p><b>2. Customer and Public Safety Performance</b></p>	<ul style="list-style-type: none"> <li>• The moving annual bus collision rate to the end of Q3 2019 is higher than the corresponding rates to the end of Q3 2018.</li> <li>• The moving annual customer injury rate for bus to the end of Q3 2019 is higher than the corresponding rates to the end of Q3 2018. Likewise, the moving annual customer injury rates for subway (both station and vehicle related) to the end of Q3 2019 are higher than their corresponding rates to the end of Q3 2018.</li> <li>• A new corporate goal has been established for continuous improvement of Traffic Safety (See Goal 5 in Attachment 1).</li> </ul>

**Audit/Assessment Results**

A number of internal and external audits and other safety assurance activities were conducted to examine different aspects of the SH&E Management System. Based on the findings, corrective actions were established and are tracked on an ongoing basis.

The table below summarizes the status of corrective actions from audits conducted in previous years. Further details on the findings and corrective actions from these audits are available upon request.

Audit	Corrective Action Status	Overdue Corrective Actions
APTA Audit (2018)	29 of 55 completed	0 of 26
Biohazard Control Program Audit	25 of 33 completed	0 of 8
SH&E Communication Standard Audit	34 of 39 completed	0 of 5
Waste Management Environmental Compliance Audit	14 of 19 completed	0 of 5
Queensway Bus Garage Environmental Audit	23 of 36 completed	0 of 13

<b>Audit</b>	<b>Corrective Action Status</b>	<b>Overdue Corrective Actions</b>
Subsurface Contamination Audit	6 of 12 completed	0 of 6
Fuel Management / Storage Tank Audit	9 of 15 completed	0 of 6

There was one audit conducted in the current review period between Q4 2018 and Q3 2019. From April 28 to May 3, 2019, the American Public Transportation Association through its wholly owned subsidiary, the North American Transportation Services Association, undertook a peer review of TTC subway yard safety. A report of findings and recommendations was provided to TTC. A total of 33 corrective actions were identified. As of November 2019, four actions are closed and 29 are open. To address the findings and recommendations of this review, a Yard Safety Working Group was formed in Q4 2019. It is sponsored by the Chief Infrastructure and Engineering Officer and the Chief Vehicles Officer. Regular updates will be provided to the SX Committee.

### **Status of SH&E Initiatives**

The table below summarizes achievements towards TTC Corporate SH&E Goals and Objectives from the Q4 2018 to Q3 2019 review period:

<b>Achievement</b>	<b>Developed/Revised</b>	<b>Date Completed/ Date Implemented/ % Completed/Implemented</b>
<b>Operational and Occupational Safety</b>		
1. SH&E Software: Acquire and implement a commercial-off-the-shelf (COTS) enterprise SH&E Software solution to manage SH&E processes through two phases.	N/A	Phase 1 at 65% completion
2. JHSC Staff Terms of Reference (Develop and Implement) (N/A)	N/A	Completed Q4 2019
3. Workplace Hazardous Materials Control Program (Implement)	N/A	Completed Q4 2019
4. Hazardous Energy Control/Lockout Tag-out Program (Implement)	N/A	76%

<b>Achievement</b>	<b>Developed/Revised</b>	<b>Date Completed/ Date Implemented/% Completed/Implemented</b>
5. Hearing Loss Prevention Program (Revise and Implement)	√	Completed Q2 2019
6. Active Fall Protection Program (Develop and Implement)	√	55%
7. OHS Hazard Identification and Risk Assessment (HIRA) Procedure (Implement)	N/A	36%
8. Job Safety Analysis (JSA) Procedure (Develop, Approve and Implement)	√	Approved Q3 2019 36%
9. Workplace Violence Program (Implement)	N/A	96%
10. Musculoskeletal Disorder (MSD) / Ergonomics Program (Implement)	N/A	94%
11. Suicide Prevention Program (Develop and Approve)	√	Approved Q1 2019
12. Traffic Safety Framework (Develop and Approve)	√	Approved Q2 2019
13. Operational Rules Oversight (Develop, Approve and Implement)	√	Completed Q4 2019
14. Procurement Element (conduct gap analysis)	N/A	Completed Q2 2019
15. APTA Subway Yard Safety Peer Review (conduct)	N/A	Completed Q2 2019
<b>Environmental</b>		
16. Environmental Plan (Develop and Implement)	√	Completed Q3 2019
17. Waste Management Program (Implement)	N/A	75%

<b>Achievement</b>	<b>Developed/Revised</b>	<b>Date Completed/ Date Implemented/% Completed/Implemented</b>
18. Idling Control Program (Develop, Approve and Implement)	√	Approved Q4 2019 34%
19. Subsurface Contamination Management (Approve)	√	Approved Q4 2018

### **Regulatory Oversight**

The table below summarizes and compares the number of events/documents issued that have involved interactions with the Ministry of Labour, Training and Skills Development (MLTSD), Ministry of Environment, Conservation and Parks (MECP), Technical Standards and Safety Authority (TSSA) and City of Toronto, including any orders issued between Q4 2018 to Q3 2019 (current review period) and Q4 2017 to Q3 2018 (previous review period). All orders and violations have been resolved.

<b>Type of Event/Documents Issued</b>	<b>Number (Q4 2018 to Q3 2019)</b>	<b>Number (Q4 2017 to Q3 2018)</b>
<b>Occupational Health and Safety Compliance</b>		
MLTSD Orders	22	36
MLTSD Field Visit Reports	47	108
Regulatory Agency Interaction Reports (RAIR) Issued	44 incidents resulting in 107 interactions	63 incidents resulting in 133 interactions
Work Refusals	8	16 (2 resolved at Stage 1)
Worker Safety Complaints	18	10
Critical Injuries	26	23
Section 52/53 Notices of Accident	3	0



Type of Event/Documents Issued	Number (Q4 2018 to Q3 2019)	Number (Q4 2017 to Q3 2018)
<b>Environmental Compliance</b>		
TSSA orders	0	3
City of Toronto Notices of Violation	2	1
MECP Inspection Reports	0	4

Any time a Fire Safety Plan is submitted to Toronto Fire Services, a full Fire Code audit of the respective property is also conducted. This has led to increased inspections at TTC (see the table below). Typically, there is a delay between TFS onsite inspections and the issuance of inspection reports. Thus, the violations and citations resulting from some inspections conducted in 2019 are not yet known as of this report. TFS process involves a 30-day and 60-day follow-up on code violations, typically resulting in four site visits for each property inspected. A new Corporate Goal #7 has been established for continuous improvement of Fire and Life Safety (See Goal #7 in Attachment 1).

Type of Event/Document Issued	Number
TFS Site Visits	~120
Inspection Order Reports	31
# of Code Violations	67 (to Jan. 14, 2020)
# of Code Violation Occurrences	248 (to Jan. 14, 2020)

### **Group/ Departmental Management System Reviews**

In October 2019, groups and departments within the TTC conducted SH&E management review surveys to assess their SH&E performance between Q4 2018 and Q3 2019. The reviews were based on a variety of SH&E performance data compiled by the Safety & Environment Department and were guided by a set of questions designed to assist the groups/departments in their performance evaluation. Group/department-level SH&E management system reviews identified a number of priorities, initiatives and opportunities for improvement in worker and customer safety, and safety support for departments.

### **Opportunities for Improvement**

As a result of this review, the following three opportunities for improvement were identified:

<b>Opportunity</b>	<b>Solutions/Strategic Options</b>
<p>Opportunity to improve the support provided by the Safety &amp; Environment Department ensuring Group/Department identified SH&amp;E needs are met.</p>	<p>Solution:</p> <ul style="list-style-type: none"> <li>• Engage a qualified external consultant to review the services currently provided by the Safety &amp; Environment Department, benchmark to similar organizations, and compare to industry best practices. Utilize report of findings and recommendations to make improvements. (Goal 8-1)</li> <li>• In conjunction with the release of the revamped S&amp;E website (Goal 1-1a), provide an S&amp;E Department overview for the Leadership Group. (Goal 1-1b)</li> <li>• Link SH&amp;E information and support with emerging technology (TTC Employee App). (Goal 1-2)</li> <li>• SH&amp;E Consultant Services will be obtained to assist with implementation of key Corporate Standards and Programs.</li> </ul>
<p>Opportunity to continuously improve and strengthen Traffic Safety.</p>	<p>Solution:</p> <ul style="list-style-type: none"> <li>• A new Corporate Goal (#5) has been established for Continuous Improvement of Traffic Safety. There are three detailed objectives under this goal.</li> </ul>
<p>Opportunity to continuously improve and strengthen Track Level Safety.</p>	<p>Solution:</p> <ul style="list-style-type: none"> <li>• A new Corporate Goal (#6) has been established for Continuous Improvement of Track Level Safety. There are three detailed objectives under this goal.</li> </ul>
<p>Opportunity to continuously improve and strengthen Fire and Life Safety</p>	<p>Solutions:</p> <p>A new Corporate Goal (#7) has been established for Continuous Improvement of Fire and Life Safety. There are six detailed objectives under this goal.</p>

### **TTC Corporate SH&E Goals and Objectives**

As a result of this review, the 2020 to 2022 TTC corporate SH&E goals and objectives were established. These goals and objectives are attached to this report as Attachment 1.

### **Contact**

---

Betty Hasserjian  
Chief Safety Officer (Acting)  
416-393-4574  
betty.hasserjian@ttc.ca

### **Signature**

---

Betty Hasserjian  
Chief Safety Officer (Acting)

### **Attachments**

---

Attachment 1 – 2020 to 2022 TTC Corporate SH&E Goals and Objectives

# ATTACHMENT 1 - 2020 TO 2022 TTC CORPORATE SH&E GOALS AND OBJECTIVES

The attachment summarizes the corporate level goals and objectives for 2020 to 2022 established from the annual review of the TTC Safety, Health & Environment Management System.

<u>Category</u>	<u>Percentage of Effort</u>	<u>Description of Effort</u>
1	0 to 25	Safety & Environment Department (S&E) to formalize or evaluate existing processes with minimal involvement required from Groups and Departments.
2	25 to 50	Development and/or implementation of a program with some existing processes and minor to moderate gaps. Group/Department effort required will vary by applicability of the program.
3	50 to 75	Development and/or implementation of a program with minimal existing processes and moderate to major gaps. Group/Department effort required will vary by applicability of the program.

## ***Goal 1: Continue to strengthen and improve the effectiveness of the SH&E Management System***

Item	Objective	Lead Department	Involved Groups/ Departments	Group/ Department Effort	Start	Finish
1	<p><b>S&amp;E Department Communications</b> (Enhance understanding and connectivity of the SH&amp;E Management System and facilitate safety support.)</p> <p>a. Revamp department Intranet website.</p> <p>b. Provide a department overview at Leadership Forum.</p>	S&E	S&E	1	Q1 2019	Q4 2020

Item	Objective	Lead Department	Involved Groups/ Departments	Group/ Department Effort	Start	Finish
2	<b>Link SH&amp;E information and support with emerging technology</b>	S&E	S&E ITS	1	Q4 2020	NA
3	<b>Contractor SH&amp;E Management Standard</b> (develop)	S&E	All	2	Q3 2018	Q4 2020
3a	<b>Construction SH&amp;E Management Program</b> (develop including COR requirements, implement)	ECE	ECE S&E M&P Subway Infrastructure Plant Maintenance Streetcar Way	3	Q1 2021	Q4 2022
3b	<b>Service &amp; Supply Contractor SH&amp;E Management Program</b> (develop, implement)	S&E	All	3	Q1 2021	Q4 2022
4	Propose leading indicator metrics for the CEO report	S&E	All	1	Q1 2019	Q3 2020
5	<b>Procure SH&amp;E Software to manage SH&amp;E business processes</b>	S&E	S&E Operations Vehicles Infrastructure & Engineering ECE M&P ITS HR	3	Q1 2016	Completed Q2 2018

Item	Objective	Lead Department	Involved Groups/ Departments	Group/ Department Effort	Start	Finish
5a	<b>SH&amp;E Software Phase 1:</b> Implement incident reporting, investigation and corrective action tracking module.	S&E	All	3	Q2 2019	Q2 2021
5b	<b>SH&amp;E Software Phase 2:</b> Implement additional modules to support business processes.	S&E	All	3	Q3 2020	Q2 2022
6	<b>Management of Occupational Health and Safety (OHS) Hazards and Risks Standard</b> (develop, approve)	S&E	All	3	Q2 2016	Completed Q4 2017
6a	<b>Hazard Identification and Risk Assessment Procedure</b> (implement)	S&E	All	3	Q1 2019	Q2 2022
6b	<b>Job Safety Analysis Procedure</b> (develop, implement)	S&E	All	3	Q2 2018	Procedure approved Q4 2019 Q2 2022
6c	<b>Real-Time Hazard Assessment Procedure</b> (develop, implement)	S&E	All	3	Q3 2020	Q2 2024
7	Evaluate <b>Training &amp; Competency</b> element of the SH&E Management System	S&E	HR OTC	1	Q3 2018	Q3 2020
8	Evaluate <b>Procurement</b> element of the SH&E Management System	S&E	All	1	Q2 2018	Completed Q2 2019

Item	Objective	Lead Department	Involved Groups/ Departments	Group/ Department Effort	Start	Finish
8a	<b>Procurement</b> Corrective Action Plan (established, tracked)	S&E	S&E M&P	2	Q3 2020	Q2 2021
9	<b>Corporate Standard - Personal Protective Equipment (PPE)</b> (update, implement)	S&E	All	1	Q1 2018	Q2 2020
10	<b>Workplace Inspection Standard</b> (develop, implement)	S&E	All	2	Q3 2018	Q4 2020
11	<b>Psychological Health and Safety Program</b> (develop, implement)	S&E	All	2	Q3 2020	Q2 2022
12	<b>Light Rail Transit (LRT) Operations</b> (incorporate into SHEMS)	S&E	LRT	1	Q2 2020	Q4 2021

**Goal 2: Systematically manage occupational safety hazards with serious injury potential**

Item	Objective	Lead Department	Involved Groups/ Departments	Group/ Department Effort	Start	Finish
1	<b>Mechanical Material Handling Equipment Standard</b> (develop, approve)	S&E	Operations Vehicles Infrastructure & Engineering M&P ECE	2	Q3 2015	Completed Q1 2018
1a	<b>Safe Operation of Powered Lift Trucks</b> (develop, implement)	S&E	As 1 above	2	Q1 2018	Q4 2020
1b	<b>Safe Operation of Overhead Cranes and Hoists Program</b> (develop, implement)	S&E	As 1 above	2	Q1 2019	Q4 2021
1c	<b>Safe Operation of Vehicle Lifting Devices</b> (develop, implement)	S&E	As 1 above	2	Q3 2019	Q3 2022
2	<b>Hazardous Energy Control/ Lockout Tagout Program</b> (implement)	S&E	Operations Vehicles Infrastructure & Engineering M&P OTC ECE	3	Q3 2016	Q4 2021
3	<b>Working at Heights Standard</b> (develop, approve)	S&E	Operations Infrastructure & Engineering Vehicles M&P ECE	2	Q3 2014	Completed Q3 2016



Item	Objective	Lead Department	Involved Groups/ Departments	Group/ Department Effort	Start	Finish
3a	<b>Active Fall Protection Program</b> (implement)	S&E	As 3 above	2	Q2 2018	Q4 2021
3b	<b>Mobile Elevated Work Platform Program</b> (develop, implement)	S&E	As 3 above	2	Q2 2019	Q4 2021
3c	<b>Ladder Safety Program</b> (update, implement)	S&E	As 3 above	2	Q3 2018	Q4 2021
3d	<b>Scaffolding Program</b> (develop, implement)	S&E	As 3 above	2	Q3 2020	Q2 2023
4	<b>Machine Guarding Standard</b> (develop, implement)	S&E	Operations Infrastructure & Engineering Vehicles ECE	3	Q3 2020	Q2 2023
5	<b>Electrical Safety</b> (gap analysis against requirements in CSA Standard Z462)	S&E	Operations Infrastructure & Engineering Vehicles ECE	2	Q2 2019	Q4 2020
5a	<b>Electrical Safety Program</b> (develop, implement)	S&E	As 5 above	3	Q1 2021	Q4 2023
6	<b>Fatigue Management</b> (assess)	S&E	Operations Vehicles Infrastructure & Engineering Revenue Protection HR	1	Q3 2020	Q2 2021

**Goal 3: Update existing SH&E processes to ensure compliance with legislation and best practice**

Item	Objective	Lead Department	Involved Groups/ Departments	Group/ Department Effort	Start	Finish
1	<b>Incident Reporting and Investigation Program</b> (review and update)	S&E	All	2	Q2 2020	Q2 2021
2	<b>Hearing Loss Prevention Program</b> (implement)	S&E	Operations Vehicles Infrastructure & Engineering HR ECE	2	Q4 2016	Completed Q4 2019
3	<b>Workplace Hazardous Materials Control Program (WHMIS/GHS)</b> (implement)	S&E	Operations Vehicles Infrastructure & Engineering ECE OTC ITS M&P	1	Q1 2016	Completed Q4 2019
4	<b>Managing Heat Stress Procedure</b> (develop and implement)	S&E	Operations Vehicles Infrastructure & Engineering Revenue Protection	1	Q1 2017	Deferred Q2 2020
5	<b>Managing Cold Stress Procedure</b> (develop and implement)	S&E	Operations Vehicles Infrastructure & Engineering Revenue Protection	1	Q1 2018	Deferred Q3 2020
6	<b>Workplace Violence Program</b> (implement)	S&E	All	2	Q1 2018	Q2 2020
7	<b>Smoke Free Workplace Policy</b> (update and implement)	S&E	All	1	Q4 2018	Q1 2020

Item	Objective	Lead Department	Involved Groups/ Departments	Group/ Department Effort	Start	Finish
8	<b>Subway Air Quality</b> (develop mitigation strategies and action plans)	S&E	Operations ECE HR	1	Q1 2017	Q4 2020

**Goal 4: Manage business to ensure compliance with all applicable environmental laws and regulations**

Item	Objective	Lead Department	Involved Groups/ Departments	Group/ Department Effort	Start	Finish
1	<b>Waste Management Program</b> (implement)	S&E	Operations M&P OTC Vehicles Infrastructure & Engineering ECE	3	Q2 2017	Q4 2020
2	<b>Subsurface Contaminant Management Program</b> (implement)	S&E	Operations Vehicles Infrastructure & Engineering ECE	1	Q4 2017	Q4 2021
3	<b>Storage Tank Program</b> (develop, implement)	S&E	ECE Operations Infrastructure & Engineering Vehicles	1	Q3 2020	Q2 2023
4	<b>Idling Control Procedure</b> (develop, implement)	S&E	Operations Vehicles Infrastructure & Engineering	1	Q4 2017	Q3 2021
5	<b>Environmental Plan</b> (update, approve)	S&E	Not applicable	1	Q1 2018	Completed Q2 2019
6	<b>Chemical Management Program</b> (develop and implement)	S&E	Operations Vehicles Infrastructure & Engineering	1	Q2 2020	Q4 2022

**Goal 5: Continue to improve and strengthen Traffic Safety**

Item	Objective	Lead Group/ Department	Involved Groups/ Departments	Group/ Department Effort	Start	Finish
1	<b>Driver Safety Assist Systems</b> (evaluate and pilot)	Vehicle Programs	Operations Maintenance S&E ITS OTC HR	2	Q1 2019	Q2 2021
2	<b>Traffic Safety Program</b> (develop and implement)	S&E	Operations Maintenance Strategy & Service Planning Vehicle Programs Revenue Protection Communications OTC	2	Q1 2019	Q4 2021
3	<b>Operator Risk Registry Program</b> (develop and implement)	S&E	Operations HR	2	Q2 2019	Q4 2021

**Goal 6: Continue to improve and strengthen Track Level Safety**

Item	Objective	Lead Department	Involved Groups/Departments	Group/ Department Effort	Start	Finish
1	Conduct <b>APTA Yard Safety Peer Review</b>	S&E	Infrastructure & Engineering Vehicles Operations	1	Q1 2019	Completed Q2 2019
2	<b>APTA Subway Yard Safety Peer Review Recommendations</b> (implement action plan)	Infrastructure & Engineering	Infrastructure & Engineering Vehicles Operations OTC S&E ECE	2	Q4 2019	Q4 2021
3	<b>Subway/SRT Rule Book</b> (update and issue)	S&E	Infrastructure & Engineering Vehicles Operations OTC S&E ECE	2	Q1 2021	Q4 2021
4	<b>Streetcar and Overhead Rule Books</b> (update and issue)	Streetcar Transportation and Streetcar Infrastructure	Infrastructure & Engineering Vehicles Operations OTC S&E ECE	2	Q1 2020	Q4 2021

### **Goal 7: Continue to improve and strengthen Fire and Life Safety**

<b>Item</b>	<b>Objective</b>	<b>Lead Department</b>	<b>Involved Groups/Departments</b>	<b>Group/ Department Effort</b>	<b>Start</b>	<b>Finish</b>
1	<b>Fire Safety Plans</b> (obtain TFS approval for surface properties)	S&E	N/A	1	Q1 2018	Q4 2020
2	<b>Hot Work Standard</b> (develop and approve)	S&E	N/A	1	Q2 2017	Q4 2021
3	<b>Fire Access Routes</b> (determine and establish)	S&E	Operations Vehicles Infrastructure & Engineering ECE	3	Q4 2019	Q4 2022
4	<b>Fire Safety Program</b> (update)	S&E	N/A	1	Q4 2019	Q4 2020
5	<b>Fire Equipment Management Software</b> (implement and integrate)	S&E	Plant Maintenance	1	Q4 2019	Q4 2020
6	<b>Subway System Track Level Fire Survey and Inventory</b> (conduct and document)	S&E	N/A	1	Q4 2019	Q4 2021

## Goal 8: Ensure SH&E Management System is functioning effectively

Item	Objective	Lead Department	Involved Groups/ Departments	Group/ Department Effort	Start	Finish
1	<b>External Third Party Review of S&amp;E Services</b> (review and receive report)	S&E (External Consultant)	Human Resources	1	Q3 2020	Q1 2021
2	<b>SHEMS External Third Party Audit</b> (conduct, receive report, develop action plan)	S&E	All	2	Q4 2020	Q4 2021
3	Conduct SH&E Audit of the <b>Workplace Hazardous Materials Control Program</b>	S&E	Operations Vehicles Infrastructure & Engineering OTC ITS M&P	2	Q3 2020	Q1 2021
4	Conduct SH&E Audit of the <b>Joint Health &amp; Safety Committee Item Resolution Procedure</b>	S&E	Selected Joint Health & Safety Committees	1	Q2 2020	Q4 2020
5	Conduct SH&E Audit of the <b>Respiratory Protection Program</b>	S&E	Operations Vehicles Infrastructure & Engineering HR	2	Q1 2021	Q4 2021



Item	Objective	Lead Department	Involved Groups/ Departments	Group/ Department Effort	Start	Finish
6	Conduct SH&E Audit of the <b>Discharged Water Program</b>	S&E	Operations Vehicles Infrastructure & Engineering	1	Q2 2021	Q4 2021
7	Conduct SH&E Audit of the <b>Asbestos Management Program</b>	S&E	Operations Vehicles Infrastructure & Engineering	2	Q1 2022	Q4 2022

**Goal 9: Reduce the frequency of lost time injuries at the TTC**

<b>Item</b>	<b>Objective</b>	<b>Lead Department</b>	<b>Involved Groups / Departments</b>	<b>Group/ Department Effort</b>	<b>Start</b>	<b>Finish</b>
1	<b>Musculoskeletal Disorder Prevention (Ergonomics) Program (implement)</b>	S&E	All	3	Q2 2018	Q2 2020