

TTC AUDIT COMMITTEE REPORT NO.

MEETING DATE: October 25, 2013

SUBJECT: TTC AUDIT REPORT – RAIL INFRASTRUCTURE
DEPARTMENT - SUBWAY/SRT TRACK AND MAINTENANCE
ENGINEERING

INFORMATION ITEM:

RECOMMENDATION

It is recommended that the TTC Audit Committee receive for information the attached TTC Audit Report.

01-27



TORONTO TRANSIT COMMISSION

AUDIT OF SUBWAY/SRT TRACK AND MAINTENANCE ENGINEERING

OPERATIONS AND SAFETY GROUP RAIL INFRASTRUCTURE DEPARTMENT

Covering Period:
January 2011 to June 2012

TTC AUDIT DEPARTMENT
Joseph L. Kennelly, Head of Audit
Phone: (416) 393-2030; Email: joseph.kennelly@ttc.ca

FILE NO. 11-30051-A

MAY 2013

TABLE OF CONTENTS

	Page No.
EXECUTIVE SUMMARY	ES –1
BACKGROUND.....	1
AUDIT SCOPE AND OBJECTIVES	2
AUDITED ITEMS FOUND ACCEPTABLE	3
ANALYSIS AND RECOMMENDATIONS	
1. Subway Track Defect Reporting	4
2. Safety Training and Development	6
3. Design Review	8

EXECUTIVE SUMMARY

This audit assessed the key management and operational controls of the Subway/SRT Track and Maintenance Engineering sections of the Rail Infrastructure Department. The audit focused on the following key areas; Track Repair and Maintenance, Employee Training and Development, Contact Administration and Engineering Design Review.

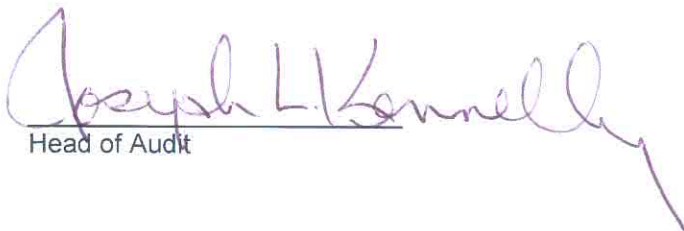
The audit disclosed weaknesses in the Maintenance of Way Information System (MOWIS) which reports and tracks track related defects and deficiencies. While track defects are being reported and repaired, the repairs are not being reviewed and closed in MOWIS by the supervisors. As a result the system is not being used as a management control and planning tool.

Audit also noted deficiencies pertaining to employee training and development. Several employees had not completed their recertification training within the prescribed period and the training records were not up to date.

In addition the Engineering section did not ensure that all the required sign-offs were obtained and on file and their Standing Operating Procedures (SOP's) were not updated to reflect current procedures.

There was general agreement on the audit findings and recommendations. Actions are underway to address the deficiencies.

We wish to express our thanks for the cooperation and assistance from all parties during the course of the Audit.



Head of Audit



Auditor

BACKGROUND

Prior to the departmental reorganization in 2012, at the time of the audit the Rail Infrastructure Department consisted of five sections: Subway and SRT Track, Streetcar Way, Structure Inspection, Structure Maintenance and Maintenance Engineering. These sections are responsible for the inspection, maintenance, replacement and rehabilitation of subway, streetcar and SRT track and related structures. They also provide technical engineering and construction coordination services, survey support, and property development design reviews, as well as, prepare designs and contract documents for both subway and surface track projects.

The approved 2012 budget (in thousand \$) for the Subway/SRT Track and Engineering Maintenance Sections operating is outlined below:

BUDGET	Labour	Non-Labour	Total
Subway/SRT Track	\$12,567.9	\$3,196.4	\$15,764.3
Engineering Maintenance	\$895.2 ---	\$646.1 ---	\$1,541.3 ---
TOTAL	\$13,463.1	\$3,842.5	\$17,305.6

The approved employee positions for the Sections for 2012 are as follows:

EMPLOYEE POSITIONS	Operating	Capital	Total
Subway/SRT			
Management/Supervisory	35	8	43
Hourly (incl. Clerical)	122	58	180
Engineering Maintenance			
Management/Supervisory	4	30	34
Hourly (incl. Clerical)	---	2	2
TOTAL	161	98	259

AUDIT SCOPE AND OBJECTIVES

Scope: A review of key management and operational controls of the Subway/SRT Track and Maintenance Engineering sections of the Rail Infrastructure Department for the period January 2011 to June 2012.

Objectives: To assess the management and operational controls to ensure:

- accountability and reporting relationships are appropriate for the TTC
- due regard for economy, efficiency and effectiveness
- procedures and processes are in place to measure and report on key activities
- compliance with legislative and TTC requirements
- timeliness, accuracy, completeness and authorization of transactions and data
- safeguarding and control of assets

AUDITED ITEMS FOUND ACCEPTABLE

KEY CONTROL	FINDING
Non-Destructive Testing (NDT)	Controls over NDT inspection schedules and reporting requirements were found to be operating effectively.
Rail Wear Inspections	Annual rail wear inspection controls were found to be effective.
Track Geometry Survey Services	Contract administration controls are in place to ensure track geometry services are provided in accordance with key terms and conditions.
Purchasing	Controls and processes are in place within the Department to ensure adherence to corporate purchasing policies.

ANALYSIS AND RECOMMENDATIONS

FINDING #1

SUBWAY TRACK DEFECT REPORTING

OBJECTIVE: To ensure that identified defects are reported, monitored and effectively managed.

ANALYSIS: The section uses the Maintenance of Way Information System (MOWIS) for the reporting, tracking and forecasting of track related defects and deficiencies. The system has an Open Work Orders function which reports the currently unrepaired defects. Defects are prioritized and repaired based on the assigned priority.

A review of the track defect management process found that supervisory personnel are not using MOWIS effectively to manage the open work orders reported in MOWIS.

Audit found that the Open Work Order report lists a significant number of defects as Open which through subsequent review were found to have been repaired.

While the system is being used to report and code identified defects and issue work orders, supervisors are not closing the work orders on the system once the repairs are completed. As a result the system cannot be relied upon to identify outstanding repairs and assist in planning the repair work.

RECOMMENDATIONS: Management should:

- review all the open work orders and close off the repairs which have been completed
- ensure the supervisors are closing off repairs in the system in a timely manner
- follow-up on all outstanding defects on a regular basis

MANAGEMENT RESPONSE:

Agree with all recommendations.

At the time of the Internal Audit, MOWIS was undergoing a software upgrade. New processes and procedures needed to be developed to ensure that defects were entered into the system, issued for repair by way of a MOWIS Work Order and the work order closed when the work was completed on a consistent basis.

Management has developed a process for the identification of defects and issuing of related work orders.

Management has developed a process for tracking to closure all high priority (safety critical) defects. These defects (and respective Work Orders) are reviewed once a week during the weekly Section meeting to ensure that open Defects and associated work orders are being addressed within the specified time frame for completion. This process is also routinely and regularly checked by TTC Safety for process compliance.

The process for the regular reconciling of non-safety work orders is not yet complete. Once complete, open work orders will be reviewed on a regular and scheduled basis to ensure none represent work already completed.

Completion Date: June 2013
Responsibility: Head of Rail Infrastructure

FINDING #2

SAFETY TRAINING AND DEVELOPMENT

- OBJECTIVE:** To ensure training and development activities are effectively managed, and that employees have up to date skills and knowledge required to perform their responsibilities.
- ANALYSIS:** The section employees are required to complete various safety and job related training. Some courses require recertification at predetermined intervals.
- A review of the training records maintained by the section found the following discrepancies:
- Eight of the ten employees reviewed did not complete one or more of their recertification training within the prescribed period.
 - The training matrix, which identifies mandatory training requirements by position, is out of date. Audit was informed that some of the identified training is no longer applicable to certain positions.
 - Training records are being maintained within the section and on the Training & Development Department Pathlore system. The Pathlore records were incomplete. All completed courses had not been entered on the system.

- RECOMMENDATIONS:** Management should ensure that:
- recertification training is completed within the prescribed timeframe
 - the training matrix is revised to include all required training by position
 - employee training information in Pathlore is maintained and is up to date

MANAGEMENT RESPONSE:

Agree with Recommendations 1) & 2). Recommendation 3) is the responsibility of the Training and Development Department.

Management will review all safety related and job related training required for all current positions and revise SOP accordingly.

Completion Date: January 2014
Responsibility: Head of Rail Infrastructure

FINDING #3

DESIGN REVIEW

OBJECTIVE: To assess the efficiency and effectiveness of the Design Review process.

ANALYSIS: A review of five design files that were completed in house by TTC draftspersons from the Maintenance Engineering section identified the following discrepancies:

- One of the drawing packages were not signed off by the Superintendent.
- Three drawings related to the King Double Crossover were missing the required sign-offs.

In addition, the Standard Operating Procedures (SOP's) for the Design Review process have not been updated to reflect current procedures.

RECOMMENDATIONS: Management should ensure that:

- files are reviewed to ensure that the Design packages are up-to-date and the required sign-offs are on file and complete
- SOP's for the Design Review process are updated

MANAGEMENT RESPONSE:

Maintenance Engineering will review the drawings on file to assure compliance with Recommendation 1.

SOP for Design Review will be reviewed and updated as per Recommendation 2.

Completion Date: June 2013

Responsibility: Head of Rail Infrastructure