

TTC AUDIT COMMITTEE REPORT NO.

MEETING DATE: April 30, 2012

SUBJECT: INTERNAL AUDIT – CONSTRUCTION DEPARTMENT

INFORMATION ITEM

RECOMMENDATION

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

Joseph L. Kennelly
Chief Auditor (Acting)

April 30, 2012
01-27

Attachment – Internal Audit Report

INTERNAL AUDIT

ENGINEERING & CONSTRUCTION BRANCH

CONSTRUCTION DEPARTMENT

Covering Period:
January 2009 to December 2010

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EXECUTIVE SUMMARY

The Construction Department operates with an approved staffing level of 190. At the time of the audit the Department was managing 135 capital projects with a 2010 budget of \$260 million.

This audit assessed the key management and operational controls of the Department. An Exit meeting was held on October 6, 2011 with the General Manager – Engineering & Construction Branch and the Chief Project Manager - Construction to discuss the findings.

Audit noted that the process to control and manage the delivery of Engineering & Construction capital projects was not as effective and efficient as it should be. Management accepted the finding and agreed with the recommendations regarding work plans and labour charges. However, management does not agree with Audit that monthly individual Project Status Reports should be prepared to ensure that the capital projects are adequately controlled.

Weaknesses associated with the use of full time in-house consultants by the Construction Department were identified. Management agreed with Audit that improvements should be made and made a commitment to do so.

In addition, weaknesses were identified in the administrative activities of the Department. Specifically weaknesses regarding controls over computers and printers, training, and Branch Policies and Procedures were noted. Management agreed and is taking appropriate action.

R.G. Beecroft
Chief Auditor

E. Csaszar
Audit Manager

FOREWORD

The Construction Department has two divisions – Project Management and Construction Management. Project Management is responsible for implementing and co-coordinating the initiation, budget requirements and funding for approval of projects. The division co-ordinates the delivery of designs, and the tendering and awarding of contracts, is responsible for project delivery to the requesting department and management of the contract budget, scope and schedule. Construction Management is responsible for administering and managing construction contracts on schedule with the designed quality in adherence to safety procedures.

The Construction Department operates with an approved staffing level of 190. At the time of the audit the Department was managing 135 capital projects with a 2010 budget of \$260 million.

AUDIT SCOPE AND OBJECTIVES

SCOPE: The audit included a review of key management, operational and financial controls of the Construction Department for the period January 2009 to December 2010.

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

- accountability and reporting relationships are appropriate for the Commission;
- due regard for economy, efficiency and effectiveness; and
- procedures and processes are in place to measure and report on the Department's activities.

To evaluate the adequacy of financial controls to ensure:

- compliance to Legislative and Commission requirements;
- the timeliness, accuracy, completeness and authority of transactions; and
- the safeguarding and control of assets and other information.

AUDITED ITEMS FOUND ACCEPTABLE

KEY CONTROL	FINDING
Capital Budget	The Department has an effective process that complies with established Toronto Transit Commission (TTC) policies and procedures to identify, justify and determine project costs.
Management Information Systems	The Department has instituted databases and supporting electronic files that provide reliable, accurate data from which management and various progress reports can be produced.
Purchasing Card and Petty Cash	Purchases made through the purchasing card and petty cash are made in accordance with established TTC purchasing policies and procedures.
Occupational Health and Safety	Committee meetings are scheduled and held; safety issues are identified and dealt with by the committee. An inspection schedule is prepared indicating the work areas and dates of inspection. Inspection reports are completed and deficiencies cleared in accordance with the legislation.
Staff Payroll, Overtime and Mileage Pay	Staff Payroll, Overtime and Mileage Pay are processed in accordance with established TTC policies and procedures.

AUDITED ITEMS FOUND UNACCEPTABLE

FINDING #1

PROJECT MANAGEMENT

OBJECTIVE: To assess that there is an effective and efficient process to control and manage the delivery of projects.

ANALYSIS: The Construction Department at the time of the audit had 135 projects with a 2010 budget of \$260 million. The approved work force included eleven Project Managers and two Senior Project Managers. These project managers are responsible for managing these 135 projects.

Audit's review of a random sample of projects revealed that key controls in the project management process are not effective and could contribute to project delays, overruns and inappropriate charges. Weaknesses were identified with Work Plans, Project Status Reports and Labour Charges.

Work Plans

Work Plans are being produced for external design consulting services and construction contracts but the filing of these documents needs improvement. Work Plans were often difficult to locate.

Audit noted that when other Departments are involved with a capital project the Construction Department Project Managers do not understand their role in managing these types of expenditures (e.g. legal services, property issues). They do not even have copies of Work Plans.

The difficulties in finding Work Plans questions whether they are being used as a control document.

Project Status Reports

The Project Status Report is the most important document in controlling a project. Audit's review of a random sample of projects clearly identified a weakness with the Project Status Report.

Project Status Reports are not being produced every month. The Finance Department will ask for only 5 or 6 per year (e.g. 2010 - periods 2, 5, 7, 10 and 12) for their global monitoring of capital expenditures. The Construction Department will not do them monthly and use them to help control their projects if the Finance Department does not ask for them.

Another concern is that similar projects are being amalgamated into one report making it very difficult for anybody to understand the status of the individual projects (e.g. three projects: Garage Subsurface Remediation Program, PCB Contaminated Electrical Equipment Elimination and Storage Tank Replacement are amalgamated into the Environmental Programs). Audit's sample indicated that three quarter of the projects were amalgamated.

As a result of this amalgamation the reports do not contain much detailed information. For example, Audit was told by the Project Manager that there was little activity in the Garage Subsurface Remediation Program for the last two years and the Project Status Reports did not dispute that. However, Audit's analysis of the General Ledger identified that \$80,000 of artwork, \$487,000 of legal services and \$482,000 for property provision had been charged to this project.

Audit was informed that Cash Flow Reports were being produced every month to control projects. Audit found that this was not the case. In addition, Cash Flow Reports are a poor substitute for Project Status Reports.

Labour Charges

The 135 capital projects that the Construction Department is managing can have charges from any of 391 E&C staff or full time in-house consultants since they all charge their time. The information is captured by a computer system known as Time Machine.

The monitoring and control over labour charges is weak. Useful reporting on labour costs is available from Time Machine, but Project Management does not appear to utilize Time Machine Reports to monitor and control labour costs. For example, a project with an original budget of \$600,000 – Cumberland Entrance to Bay Station had 57 different E&C staff and in-house consultants charge to it.

RECOMMENDATIONS: Management should ensure that:

- Work Plans are being prepared for all work assignments, can readily be accessed, and are used in controlling costs.
- For each individual project monthly Project Status Reports are prepared.
- Labour charges are monitored and unusual items investigated.

MANAGEMENT'S RESPONSES:

On Work Plans

The audit's finding of improvements needed with respect to filing of work plans have been corrected by training the staff on records management systems and document control protocol to ensure all pertinent documents, including work plans, are effectively maintained and controlled. Management has provided five training sessions to date and additional refresher training sessions will be held in the future as required.

With respect to other departments not preparing the work plans, they typically communicate details of work requirements through e-mail and/or memo. In case of Legal and Property departments' involvement with the Garage Subsurface Remediation Project, both departments have communicated the requirements via e-mails. Property Department requested that the project budget be increased to fund the Property Value Protection Plan to address the Commission's liability for environmental damage to properties immediately south of Danforth Garage. Legal Department requested for the project to fund the legal charges associated with the ongoing litigation with GE over the Lansdowne site.

Going forward, appropriate work plans will be requested for all works and services provided by other departments in support of capital projects.

On Project Status Reports

The Project Status Report (PSR) is a project reporting tool governed by Finance Department which is intended to provide relevant project information to management and other decision makers, including the City, on the status of capital projects with respect to costs, schedule, deliverables and areas of concern and action plans.

Finance Department has modified the reporting schedule in recent years taking into account the impacts of increased project review activities and competing priorities particularly during peak periods such as budget review and year end. During these periods, there is significant project review and monitoring activity going on through other means and the relief from PSR preparation provides relief to the project team to focus resources appropriately.

The amalgamation of projects grouped for PSR reporting has been applied in conjunction with the direction provided by Finance Department for City and Chief General Manager reporting purposes. This is consistent with the intended monitoring purpose of the PSR, noting that the reporting is segregated by Branch for capital program groupings or City projects, but was never intended for individual project reporting.

In addition to PSR, Management utilizes other reports to monitor and control projects including:

- General Manager Update Report – provides detailed status of projects including budget and schedule issues,
- Cash Flow Report – provides detailed financial information,
- Monthly Progress Report – provides detailed status on projects in construction, and
- Labour Charge Report – provides detailed labour charges by cost centres and individuals.

Therefore, the Project Summary Reports will continue to be prepared in accordance with the requirements and schedule established by Finance Department.

With respect to Audit's observation on various charges being made against the Garage Subsurface Remediation Project, these charges are in support of ongoing litigation with the GE at the Lansdowne site and property compensation at the Danforth Garage as noted previously in the management's response to "Work Plans".

On Labour Charges

Management utilizes various tools and reports to monitor the status of projects as noted above, including labour charge reports generated by the Time Machine to investigate when there are abnormal charges being made against projects. The example identified by the Audit was an isolated case which occurred in 2008-2009 where the staff involved in the project failed to exercise their due diligence. Consequently, the responsible staff have been reprimanded and are no longer with the department.

Management continues to exercise due diligence in monitoring and controlling all aspects of projects, including the review of labour charges against projects to ensure all charges are appropriate.

FINDING #2

IN-HOUSE CONSULTANTS

OBJECTIVE: To assess that the organizational design has clearly defined roles and responsibilities, effective reporting, and has due regard for economy.

ANALYSIS: The approved organization chart for the Construction Department has 190 positions of which 60 are identified as consultants. The use of full time in-house consultants for the Construction Department was approved by the Commission over five years ago in January 2006. The reason given for this direction at that time was that a significant increase in capital project work was identified in the 2006-2010 Capital Program.

The consultant positions are filled through two consultant contracts (Project Management - G85-211 (a partnership of Delcan, Hatch and UMA), and Construction Management - G85-213 (a partnership of MMM and McCormick Rankin)). These positions are full time in-house consultant positions that the Commission provides offices, computers, phones, etc. In addition, they are given the same training that regular staff gets. Their titles range from Senior Project Manager to Project Administration Secretary. The total fees paid on G85-211 and G85-213 in 2009 was \$9.4 million.

Consultants Supervising Consultants

The use of full time in-house consultants in the Construction Department is not the same as in T-YSSE or Transit City since the Department has 135 projects and some of the projects do not have an end in sight (e.g. Office Space Management/Renewal Program). On the average a full time in-house consultant charges a dozen different projects. In 2010 one consultant charged 34 different projects.

Staff and full time in-house consultants are assigned work by their supervisors as required. In this situation there is a greater potential for conflict of interest abuse when consultants supervise consultants. For example, the Senior Project Manager from Delcan supervises the Project Administrative Secretary from Delcan and one Project Manager from Delcan. This Project Manager supervises a Senior Project Coordinator from Delcan.

In these roles they are approving hours of work including overtime which results in billing hours for the consulting firm.

Consultant Evaluation

There is no annual performance evaluation of the individual consultants, but only an annual 'Consultant Performance Review' of the consulting partnerships. This review is not very comprehensive since the form was intended for external consultant assignments and not full-time in-house consultants.

Audit noted that for the Project Management Contract (G85-211) the latest review was done two years ago.

RECOMMENDATIONS:

Management should ensure that:

- The potential for conflict of interest abuse in the use of full time in-house consultants is eliminated.
- Detailed annual performance reviews are completed on each full time in-house consultant.

MANAGEMENT'S RESPONSES:

On Consultants Supervising Consultants

The in-house consultants are retained to supplement the existing TTC staff to manage projects during the high demand periods. The staffing level of in-house consultants is reviewed and adjusted annually to ensure that appropriate level of resource is available to manage the planned project work.

Recognizing the potential for conflict of interest when Construction Department expanded in 2006 to include in-house consultants as a part of integrated project management team to support increased capital project needs, Management implemented a "Conflict of Interest" procedure to prevent conflict of interest when in-house consultant is managing the work of an external consultant for design services. The procedure was developed in conjunction with Materials and Procurement and Legal departments to ensure that the dealings of Construction Department, its employees and consultants are transparent, can withstand public scrutiny and can avoid any perception of conflict of interest when conducting the Commission's business.

However, Management concurs with the audit's finding that there may be a potential for conflict of interest. To address this, Management reviewed the organization structure of the department including the reporting structure on the two Senior Project Managers, one of which is a consultant position.

Consequently, the consultant Senior Project Manager position will be converted to a TTC position to eliminate the potential for conflict of interest.

COMPLETION DATE: Summer 2012

On Consultant Evaluation

Management will be conducting annual performance evaluation of individual in-house consultant staff.

COMPLETION DATE: February 2012

FINDING #3

ADMINISTRATION

OBJECTIVE: To determine whether the administrative activities of the Department are effective.

ANALYSIS: Audit's review of the administrative management controls for the Construction Department identified the following areas where there are weaknesses:

Computers and Printers

Computers and printers are being moved by Branch staff without the required documentation. Audit's sampling of the Department's computers showed a 25% difference from the list maintained by Information Technology Services (ITS). In addition, ITS's records showed 15 printers for the Construction Department at 5160 Yonge. Audit found only 2 out of the 15, but found 10 others that were not on the list.

Without adequate controls and review of assets, there is a potential for loss of TTC property.

Training

Each position within the Construction Department requires certain mandatory safety training courses as established by the Department (such as Subway/ SRT Rule Book, HIRA, and Fall Protection Awareness). Audit's sampling showed that 60% of the safety training identified as mandatory for staff was not met. For in-house consultants 85% of the safety training identified as mandatory was not met.

Lack of timely training may expose employees and consultant staff to risks, hazards and liabilities that could be avoided.

Branch Policies and Procedures

Audit's review of the E&C Policies and Procedures Manual indicated that most issues were adequately addressed. However, some of the policies and procedures (e.g. Design Review and Tender Release) require updating to reflect the present organization structure (i.e. Project Management now falls under the Construction Department and not the Engineering Department).

Audit identified one area where a policy and procedure was lacking. Presently, a written policy or procedure is not in place on the decision process for using internal engineering or external engineering for design assignments.

RECOMMENDATIONS: Management should ensure that:

- Effective procedures are in place to safeguard computer equipment.
- Effective procedures are in place to ensure all employees are getting the appropriate safety training required to perform their jobs.
- Branch policies and procedures are up to date and adequately address engineering design assignments.

MANAGEMENT'S RESPONSES:

On Computers and Printers

The audit's finding of 25% discrepancies with the computer listing for Construction Department was a result of high staff turnover experienced over the last few years. Total of 33 staff have left the department to join Spadina Subway Extension Department and Transit Expansion Department (TED). Consequently, a large number of new staff joined Construction Department and these staff changes have not been updated to the computer listing maintained by Information Technology Services (ITS) Department.

The audit has also noted that 13 out of 15 printers shown as belonging to Construction Department based on ITS Department's records could not be found. Of these 13 printers, 7 printers were transferred to TED in 2009 but records were not updated, 5 printers were moved to various satellite offices of Construction Department and 1 printer was replaced by ITS but records were not updated. Furthermore, the 10 printers that audit has found but not on the ITS Department's record were an administrative error as they were incorrectly identified as belonging to Engineering Department.

Subsequent to the audit, Management completed an inventory review of computers and printers for Construction Department to account for all of them and the list was forwarded to ITS Department for their record. Furthermore, an annual review of computers and printers will be undertaken and list forwarded to ITS Department for their record.

On Training

As noted above, Construction Department experienced a significant staff turnover, particularly with eight Project Managers being new to the department, whose responsibility also include training of their staff. Recognizing this, Management conducted a comprehensive review of all training records of department staff and started to develop a database to consolidate training records in early 2010, prior to the start of the audit. In addition, Management reviewed staffs' training needs as a part of their 2010 employee performance appraisal to document and plan their training for 2011. Subsequently, 151 out of 157 department staff have now completed the mandatory safety training to date and the remaining 6 staff are scheduled to complete their mandatory safety training over the next few months.

COMPLETION DATE: April 2012

On Branch Policies and Procedures

The Branch Manual and the departmental procedures are periodically reviewed and revised as required. The audit's referenced Design Review and Tender Release procedure will be revised to reflect the current organization structure.

Currently, Construction and Engineering departments meet periodically to review upcoming design assignments to determine whether the designs will be done internally or externally, taking into account the current work load of Engineering Department and availability of required technical staff. Management will formalize this process by documenting it.

COMPLETION DATE: March 2012