



REPORT TO

## CORPORATE SERVICES, STRATEGIC PLANNING AND PROPERTY COMMITTEE

### REDUCTION OF PROFESSIONAL SERVICES COSTS FOR CAPITAL PROJECTS

*"I can do all this through Him who gives me strength."  
Philippians 4:13 (NIV)*

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<b>INFORMATION REPORT</b>		

#### Vision:

*At Toronto Catholic we transform the world  
through witness, faith, innovation and action.*

#### Mission:

*The Toronto Catholic District School Board is an  
inclusive learning community uniting home, parish  
and school and rooted in the love of Christ.*

*We educate students to grow in grace and  
knowledge to lead lives of faith, hope and charity.*



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## A. EXECUTIVE SUMMARY

This report addresses a trustee request to investigate ways to decrease costs for architectural services. The report reviews TCDSB purchasing procedures for architectural services and architectural associations' recommended fees.

An analysis of architectural fees for seven recent elementary school Capital projects indicates that fees paid by the TCDSB for basic architectural services are on average less than 50% of the of the fees recommended by the Royal Architectural Institute of Canada in 2009. There is little room to reduce fees further without reducing service to an unacceptable level.

Options reviewed to reduce fees as noted in Table 2, have associated risks and consequences for the Board, which may impact quality and project delivery timelines. The options include the use of repeat school designs, elimination of building system commissioning, transferring work of feasibility studies and coordination of municipal approval applications to staff, no participation by architects in school or community consultation, no presentation drawings, no exploration of energy saving or sustainable features including Net Zero and architect selection based on price only with no prequalification.

**The cumulative staff time dedicated to developing this report was 29 hours.**

## B. PURPOSE

1. At the Student Achievement Board Meeting of June 2, 2016, there was a Trustee motion regarding strategies to “decrease costs for consultants and architectural firms, with savings used to offset costs of air conditioning, green roofs, gyms, etc.”

## C. BACKGROUND

1. Under the Ontario Building Code (OBC), schools are classified as “*assembly occupancy*.” The Building Code requires that all building of *assembly occupancy* be designed by a professional architect holding a **Certificate of Practice with the Ontario Association of Architects** (OAA). Structural, mechanical and electrical systems are to be designed by qualified professional engineers.

2. The OBC further stipulates that *General Review* of construction must be carried out by an architect for the building, and by the respective engineers responsible for the design of the structural, mechanical and electrical systems.
3. Board staff cannot provide the professional services required to certify a design, nor review the construction of schools, as defined under the OBC, because the Board, as a corporate entity, cannot not hold a Certificate of Practice and does not carry professional liability insurance for architects or engineers. One of the prime reasons why the Board uses architects and engineers is that their services are covered by their professional associations and liability insurance.
4. Architects are the only professionals qualified to design and provide advice, including technical and aesthetic judgement, on the built environment. In matters of public health and safety, architects are obliged to serve the public interest and respond to the public need. This mandate has been expanded in the present day to encompass the sustainability of the global environment and accessibility for all persons.
5. The TCDSB Procurement Policy and Purchasing Procedures Manual, which adheres to the Broader Public Sector Procurement Directive, requires a competitive process in the acquisition of goods and services whose value exceeds \$5,000.00, whenever possible.
6. Architects for TCDSB Capital and Renewal projects are selected by either a Request for Quotation (RFQ) for small projects where a list of prequalified consultants is available, or a Request for Proposal (RFP) including detailed evaluation through scoring of technical and creative skills and experience in addition to price, for large projects.
7. School design projects are rewarding for architects, as they represent interesting design challenges and service to the public, therefore many architects are willing to price their services lower than their associations' recommended fees in order to secure the work. RFP's and Requests for Prequalification for TCDSB school projects routinely attract between 50 and 150 submissions. Competition, therefore, is very healthy for school projects, resulting in opportunities for the Board to retain well-qualified firms for very reasonable fees.

8. Architectural services generally are divided into two categories — “basic” and “additional services.” Basic services are those that are traditionally required for a typical project and are predictable and clearly defined. These are the standard services related to schematic design, design development, building permit application, construction documents, tendering, construction contract administration, field review and one-year warranty inspection, Services of structural, mechanical and electrical engineers are included. (See Appendix A—Checklist: Scope of Services, from the Royal Architectural Institute of Canada (RAIC) “*Guide to Determining Appropriate Fees for the Services of an Architect.*”)
9. Both the OAA, in 1988, and the RAIC, in 2009, have published recommended fees for basic architectural services as outlined above, based on percentage of construction cost (includes HST and building permit). Refer to Appendices B and C. The recommended percentages are on a sliding scale, increasing with building complexity and decreasing with increasing construction cost. The 2009 RAIC fees are higher than the 1988 OAA schedule due to factors such as increasingly sophisticated building systems, more detailed project documentation requirements and greater expectations for energy conservation and building performance.

#### **D. EVIDENCE/RESEARCH/ANALYSIS**

1. The majority of architectural fees for Capital projects are based on a fixed fee, rather than a fee based on percentage of construction cost. This ensures that the consultant will not be motivated to allow construction costs to escalate to obtain a higher fee. For the purposes of comparing fees paid by TCDSB to the above-noted industry standard fee schedules using percentage-based fees, the fixed fees from recent TCDSB Capital projects have been converted to percentage based fees in Table 1 below.
2. Table 1 summarizes the results of an analysis of architectural fees for seven (7) recent elementary school Capital projects as compared to the OAA 1988 Fee Schedule and to the RAIC 2009 “*Guide to Determining Appropriate Fees for the Services of an Architect*” recommended percentage fees (refer to Appendix C):

**Table 1: Architects' Fees as Percent of Construction Cost in Capital Projects**  
*(Note: "Construction Cost" as defined by the OAA and RAIC includes full HST)*

	Project Type	Construction Cost or Estimate (incl. 13% HST)	Basic Fee (w/o tax) % of Construction Cost	OAA 1988 Schedule Basic % Fee	RAIC 2009 Recomm. Basic % Fee	Total Fees % of Construction incl. Additional Services, Expenses, & Net HST
1	Addition	\$2,870,823	<b>4.56%</b>	6.85%	9.40%	7.54%
2	Addition	\$5,301,292	<b>3.83%</b>	6.60%	9.40%	6.09%
3*	Addition: *Note construction tender cost was significantly below cost estimate:					
3*	Actual Cost	\$7,167,435	<b>6.26%</b>	6.40%	9.20%	9.50%
3*	Estimated:	\$8,951,860	<b>5.01%</b>	6.40%	9.20%	8.41%
4	New School	\$11,839,261	<b>4.33%</b>	6.20%	9.00%	6.73%
5	New School	\$12,692,137	<b>5.06%</b>	6.20%	9.00%	8.80%
6	Addition	\$12,753,141	<b>4.77%</b>	6.20%	9.00%	6.91%
7	New School	\$19,294,627	<b>3.86%</b>	6.10%	9.00%	6.44%

3. Note from Table 1 that the "Basic Fees" for the seven Capital projects range from 3.83% to 5.06 % as a percentage of the construction cost (using the estimated construction cost before tender for Project # 3—see note to Project # 3 above).
4. On average, based on the above analysis of recent projects, TCSDS is paying about 70% of the fees recommended by the OAA in 1988 and **less than 50%** of the fees recommended by the RAIC in 2009 for basic services.
5. TCDSB school projects typically require the following additional services and specialty consultants (included in "Total Fees %" column in Table 1 above):
  - Civil engineering (grading and storm water management)
  - Landscape consultant
  - Topographical and property survey
  - Geotechnical investigation
  - Hazardous Materials survey and abatement specifications
  - Energy Modelling
  - Municipal Site Plan Approval including meetings with City staff

- Construction cost estimates by Quantity Surveyor
  - School community consultation and presentations
  - Mechanical systems commissioning
5. The following services and studies also may be required for some projects:
- Green roof design
  - Demolition documents and tendering
  - Design revisions due to unforeseen site conditions
  - Upgrades to existing building systems
  - Arborist report
  - Traffic studies, archaeological studies, noise studies, shadow studies
  - Exterior lighting analysis
  - Heritage Impact Assessment
  - Environmental Assessments
  - Design of municipal infrastructure upgrades
  - Building Code consultant to justify OBC interpretation
  - Feasibility studies
  - Rezoning application
  - Committee of Adjustment application and hearing
  - Public meetings and presentations
6. Expenses that must be reimbursed to consultants in addition to the fees include printing, courier, long distance communications and 3D renderings for presentations (included in “Total Fees %” column in Table 1 above). TCDSB does not allow consultants to charge for travel within the GTA.
7. When all fees for additional services, expenses and net HST are included, the total professional services costs for the seven projects in Table 1 are still lower than the RAIC recommended fees for basic services only.
8. The following factors will likely contribute to increasing architectural fees for TCDSB school projects in the future:
- Requirement for innovative design for “21<sup>st</sup> Century Learning
  - Requirement for Registered Communications Distribution Designer (RCDD) to meet IT standards
  - Difficult sites – undersized and/or grading and access issues
  - Requirement for Net Zero design
  - Life Cycle costing to support sustainable design decisions and funding
  - Increased on-site supervision for Net Zero construction

- Increased commissioning services for Net Zero
  - Multiple users such as child care and other community partners
  - Increasing complexity of Municipal Site Plan Approval process
  - Increased community consultation
9. New gymnasiums cost approximately \$1.5M if constructed as part of a larger project, more if a stand-alone project. Total architectural fees and expenses including net HST, and including significant extraordinary site work, for the two large addition projects in Table 1 that included new gyms were \$680,661 and \$881,541.
  10. The Ministry of Education provides additional funding for green roofs or cash-in-lieu where required by the City of Toronto, upon submission of the cost consultant report for each project.
  11. With the Board's resolution to move toward Net Zero, i.e. reduce greenhouse gas emissions and energy use, while maintaining or improving comfort levels of students and staff, the role of well-qualified architects will be more important than ever. In particular, paying consultants for their knowledge and evaluation of alternative heating and cooling technologies and systems, and building envelope designs that conserve energy, is critical to achieving the Board's goals.

## E. VISION

VISION	PRINCIPLES	GOALS
To provide sustainable educational environments that enhance learning and teacher and student well-being and that endure over time.	<ul style="list-style-type: none"> <li>• Stewardship of resources</li> <li>• Quality of construction</li> <li>• Fairness in procurement</li> <li>• Fiscal responsibility and accountability</li> </ul>	Through a detailed evaluation process, meeting the Board's procurement policy, select firms that will provide the best value in delivering the services and oversight required to complete high quality work on time and on budget.

## F. ACTION PLAN/OPTIONS

1. Table 2 outlines the options that may be considered for reducing architects' fees, **approximate** average potential savings per project and consequences:



**Table 2: Architectural Fee Reduction Options**

#	OPTION	SAVINGS	RISKS/CONSEQUENCES
1	Repeat Design – new schools only, not feasible for additions or renovations  Potential savings in design time	\$200,000	No design variation to accommodate school specific programs; no school community input on design; schools must be the same size; must use the same architect; difficult to do as TCDSB site conditions vary widely, site issues require specific design solutions
2	No commissioning of various systems	\$ 20,000	No assurance that heating, cooling and ventilation systems will function properly or optimally; increased pressure/workload for maintenance staff
3	Staff carry out feasibility studies and coordinate building permit and Site Plan Approval (SPA) applications	\$10,000	Increase in staff required; must ensure staff have required expertise; Ministry Capital Priorities often based on third party feasibility studies
4	No participation by architect in school or community consultation, incl. no presentation drawings	\$6,000	Loss of direct communication with architect will affect design response; increased pressure on staff not trained in presentation; less effective presentations, staff may not be able to answer questions from public
5	No exploration of energy saving or sustainable features incl. Net Zero	unknown at this time	Counter to board resolution to move toward Net Zero and MYSP principle of stewardship of resources
6	Selection of architects based on lowest fee only with no prequalification and no Work Plan	\$100,000	Firms with no school experience, no proven performance record, poor design skills, resulting in unattractive and poorly functioning designs, poor energy performance, increased staff time to correct designs, explain standards and coordinate work; increased construction costs and time due to poor documents, lack of cost control



		experience and poor on-site supervision
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## G. METRICS AND ACCOUNTABILITY

1. The Board's RFP process includes the submission of a detailed Work Plan by proponents outlining the tasks and deliverables at each stage of the project. Proposals are scored by a team of three evaluators who rate the Work Plan, the proposed team's previous school experience, cost control performance and design skills, together with the proposed fee to determine the proposal that represent the **best value** and best control of construction costs and time.
2. The Board's *Other Terms of Contract* to the Client-Architect Agreement, developed with legal consultation, limits the rate charged for additional services not included in the RFP to \$80 per hour. It also stipulate that there will be no administrative mark-up on disbursements.
3. The Board's policies for management of financial liability require architects to review the progress of construction and provide Certificates for Payment to verify contractors' invoices before payment is made to contractors.
4. Architectural fees are included in EDU funding for Capital and Renewal projects. Any savings in fees or construction costs cannot be transferred to Operations or Administration budgets. In fact, as noted in Table 2 above, reductions in architects' fees could result in increased pressure on the Board's Operations and Administration budgets due to increased maintenance and project coordination requirements.
5. Where Education Development Charges (EDC's) are applicable to a project, fees related to site preparation and of-site municipal upgrades are covered by EDC's, which may alleviate pressure on the project budget. The Ministry of Education has provided additional funding, including the associated fees, for site preparation work, demolition of existing building(s), and the Toronto Green Standards, including green roofs as required by the City of Toronto.
6. The Ministry of Education benchmark funding formula includes 15% for softs costs. Soft costs consist of consultant fees, municipal permits, furniture and equipment, internal project management costs and net HST. Total soft costs for TCDSB projects are consistently well below the benchmark, at an average of 12.2% for the seven projects analysed in Table 1. The balance is retained within the project, and can be shifted over to fund the construction portion of the project budget. The EDU requires boards to submit a detailed

third-party cost consultant report for all capital projects, for Approval to Proceed.

7. Procurement of professional services for Renewal work is typically based on a competitive *Request for Quotation* process, based on lowest fee, from a list of prequalified consultants.
8. In addition to hiring architects, internal management of Capital projects by professionally qualified staff further ensures high design quality and budget and schedule control.

## **H. IMPLEMENTATION, STRATEGIC COMMUNICATIONS AND STAKEHOLDER ENGAGEMENT PLAN**

1. Each RFP for architectural services is reviewed and revised to incorporate lessons learned from previous projects to ensure that the requested services and submission requirements are clearly defined for optimal pricing.
2. Requests for prequalification of architects, engineers and para-professionals for Capital and Renewal work are publicly issued through the provincial on-line bidding system to ensure strong competition and encourage submissions from new firms.
3. As per the TCDSB Procurement Policy, architect appointments for new schools and major additions are approved by the Board of Trustees.
4. From a strategic planning perspective the hiring of well-qualified architects results in high quality work completed on time and on budget, comfortable spaces that work for students and staff and long term benefits to the Board in reduced energy, maintenance and operation costs, improved student performance and buildings that enhance their communities. Well-designed buildings also attract families and students and promote public confidence in the process of building new schools in communities.

## **I. CONCLUDING STATEMENT**

This report is for the information of the Board.