

# Background

The Steering Committee for the Northern Ontario School of Architecture (NOSOA) - chaired by Blaine Nicholls and comprised of a number of well-known and respected community leaders - convened for the first time in early 2007. The committee embarked on a 3-phase process which upon completion, would result in the first new Canadian School of Architecture in almost 40 years.

## The 'Cambridge Model'

The project was conceived as a way to revitalize the downtown and develop the regional economy. Recent developments in Cambridge Ontario showed what could be done. Like many mid-sized cities throughout North America, Cambridge was in desperate need of an economic development solution to help revitalize its downtown. Fate intervened when the city learned that the University of Waterloo School of Architecture was in dire need of more space for their growing program. Upon hearing that such an expansion was not going to happen on campus, the City of Cambridge and its community jumped at the opportunity to offer their downtown as the new home for the school. The obvious economic and cultural value of the project generated immediate acceptance from the community and has blossomed into an influential, mutually beneficial relationship.

The school has been operating very successfully for the last 3 years. As a result, Cambridge is experiencing a level of cultural and economic revitalization that it has not seen in a number of decades. This is the basis for the idea that the Steering Committee is bringing to the North. They see the School of Architecture as a tremendous opportunity to enrich the economy and culture for Greater Sudbury and Northern Ontario.

## Phase I

Phase I of the NOSOA project consisted of concept development, general research, and a pre-feasibility analysis. Also included in the Phase I was the organization of a workshop in Cambridge, Ontario, in conjunction with the 2007 Association of Collegiate Schools of Architecture (ASCA) conference. The workshop was attended by a group of international architectural educators and was focused on the NOSOA project. The results from the workshop reinforced the conclusion that a new school of architecture was needed and that Northern Ontario was an ideal location.

Phase I culminated with a presentation of the results of the Steering Committee's work to the Board of the Greater Sudbury Development Corporation (GSDC) and subsequently to the City of Greater Sudbury Council. The presentation of the Phase I analysis outlined the following:

- The need for NOSOA and the market for students and graduates
- The benefits that the NOSOA would bring to:
  - Northern Ontario
  - The City of Greater Sudbury (and the synergies with the City's strategic plans)
  - The Downtown Core
  - Laurentian University and other educational institutions in Northern Ontario
  - The Profession of architecture in Northern Ontario
- The additional economic, social and cultural benefits
- The potential program model and curriculum themes
- The broad implementation strategy

The conclusions from Phase I were accepted by the GSDC Board and as a result, the project Steering Committee was given approval and financial support to proceed with the development of the more detailed Phase II feasibility study. Phase I was carried out with financial support from GSDC<sup>1</sup>, FedNor, NOHFC, and the Northern Ontario Society of Architects (NOSA).

## Phase II

Divided into two stages, Phase II consists of the (A) Feasibility Study and (B) Planning and Approval. Phase II will further develop the concept for the project and confirm the need for a new School of Architecture at national, provincial, regional, and local levels. The Feasibility Study developed the business case for the school and is being used to gain overall commitment to the project.

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<sup>1</sup> GSDC's funding helped to leverage support from FedNor and NOHFC.

Issues discussed in the Feasibility Study include:

- Economic, cultural and social impacts
- Building requirements and site options
- Capital funding requirements
- Start-up / Operational funding requirements
- Funding opportunities
- Curricular themes
- Development of the process leading to occupancy and accreditation

The Feasibility Study is to serve as a resource for the City of Greater Sudbury, Laurentian University and the Northern Community with regard to their decisions pertaining to the new school. It is also part of an effort to leverage support for Phase III, Implementation.

Phase II was carried out with financial support from the GSDC, FedNor, NOHFC, and NOSA.

### Phase III

Objectives of Phase III include further development of the following:

- Designing the program and curriculum
- Form sub-committees/consultation groups in order to address, amongst others, Francophone and Aboriginal perspectives
- Align with an appropriate faculty
- The hiring of key faculty and staff
- Site selection, hiring of architectural team and building design

It should be noted that the NOSOA committee is in the process of completing funding applications to FedNor and NOHFC for Phase III. It is NOSOA's intention also to make a request for funding to the GSDC Board for this phase.

## Does the project represent a valid public policy issue?

As indicated in the feasibility study, Northern Ontario has a unique character that is a product of the Boreal forest, the Canadian Shield and a northern climate. It is a land with its own challenges and opportunities; inhabited by culturally diverse and sophisticated peoples who are increasingly aware of their potential and the wonders of their land. Despite almost 200 years of economic and cultural direction from the south, the north has created flourishing communities of distinctive character.

According to the study, the Northern Ontario School of Architecture plans to reach out to communities across the region and the country, to develop the design tools, built form and urban landscape for Canada's smaller and remote communities, as well as resource towns. It will reach out across the pole to build partnerships throughout the Boreal region. It will become an international institution, with a distinct role in Canada and around the world. No other initiative captures the belief that the successful cities of the future will be those that attract and hold the most creative people.

NOSOA will make a major contribution to the economic development of the North by:

- Stimulating the quality of urban and community development
- Promoting cultural development through the design of buildings and public spaces
- Bringing a pool of design skill and building expertise to the industrial sector
- Strengthening the design culture that is essential to making local products more competitive in the global market
- Boosting the value-added industries with designs suited to the region and regional materials
- Building on Greater Sudbury's reputation for environmental sustainability
- Creating the first School of Architecture outside of Quebec that supports study in French

**Design capacity is necessary for economic development. Expanding the knowledge sector boosts design capacity. NOSOA will help achieve this goal.**

The report indicates that there is a shortage of seats in Canadian Architecture Schools. Ontario has fewer than 300 places, in schools of architecture for the annual 2,400 applicants.

Schools of Architecture require students to have an 80% average, strong mathematical and writing skills, and strong evidence of creativity. NOSOA will attract some of the best students in the country.

The job market for architecture graduates continues to be very strong. The number of architects retiring from the profession exceeds the number of graduates, and the existing schools of architecture cannot expand to accommodate this demand. Also, because of their diverse training, architecture graduates often find themselves applying their skills in related fields, from game design and advertising to urban planning.

NOSOA will contribute to Laurentian University's international visibility and cachet. NOSOA intends to be a high quality program that attracts over 400 students and a group of creative faculty members and staff. It will augment Laurentian's mandate to provide the best possible educational opportunities (in both English and French) for Northern Ontario students, particularly at a graduate level, and it will add to Laurentian's partnership with the City of Greater Sudbury and communities across the Region.

The blend of high-level technical, humanistic and creative arts will provide a foundation for other creative programs and will reinforce the existing engineering program. NOSOA will also nurture the creative aspirations of students at the elementary, secondary and community college levels.

In the next planning phase, the curriculum for the school will continue to evolve as the project advances and key personnel become involved. The development of the curriculum will involve a consultation process with the many key stakeholders for the project. These will include, amongst others, the University, the architectural profession, and communities across Northern Ontario such as the Francophone, multicultural and First Nations. These discussions are already beginning to take place.

There are a variety of models for schools of architecture in Canada and internationally. At present, the model for NOSOA is proposed as a 4-year undergraduate program, followed by a 2-year masters program, leading to a Masters of Architecture degree. The steering committee envisions incorporating a Co-op program, which combines work terms with academic terms. The Co-op program creates tremendous opportunities for students to gain valuable exposure to firms throughout the world as well as work experience across Northern Ontario. As a result, the school will operate year round.

A building of approximately 75,000 square feet is necessary to house the School of Architecture. This would accommodate the variety of spaces that a modern school requires, such as studios, lecture spaces, presentation theatres, a library, workshops, graphic workshops, exhibition galleries, and offices. The building could be built new or could be the renovation of an existing building. The site selection process and the design of the building will be part of the next phase of planning.

A downtown location for the school will provide the greatest benefit for the city culturally and economically. Architecture attracts talented and creative students who engage with the community around them and they attract others who want cultural and intellectual excitement. Architecture students and faculty, more than any other, thrive in and in turn, stimulate their urban environment.

Adding over 400 students to the downtown, NOSOA itself will add over \$6 million annually in direct spending, and students will add almost \$5 million more. Taking into account the multiplier effect, NOSOA will boost the City's GDP by \$15 million, annually. Induced effects may ultimately dwarf the direct impact, as NOSOA makes the downtown more attractive, helping to attract new business and professionals, and most importantly, new residential development. Hence, the investment of capital cost that creates the school becomes relatively minor when compared to the positive economic impacts.

The recent example of the relocation of the University of Waterloo School of Architecture to downtown Cambridge shows how a project like this happens. In order to create an excellent facility in which to operate the School of Architecture, the community, the City, the provincial government and the federal government joined together to provide the capital funding.

After only three years, the evidence is clear that the capital investment has been more than recovered.

The world needs sustainable, ecologically sound architecture that is light on the land, uses domestic material elegantly, and minimizes the human footprint. The Northern Ontario School of Architecture plans to push forward this agenda within a new creative institution.

## Does the business case appear to make sense, based on the information on hand?

### Building Program

The staggered student population growth of the school means that a complete facility is not required until the third year of operations. Until that time, temporary space in the downtown core can be utilized for temporary housing of the school. Based on the number of students per year, the following annual facility needs have been determined. **The total building square footage needed is 75,000 sq. ft.**

	Stage I		Stage II		Stage III	
	2011	2012	2013	2014	2015	2016
Administration	905		360			
Faculty & Staff	2,705		2,315			
Students	15,490		13,900			
Workshop	1,750		2,120			
Library	770		12,535		565	
IT & Media	2,740		705			
Support	3,650		-		4,465	
Circulation	3,447		3,821		604	
<b>Space Required</b>	<b>32,172</b>		<b>35,666</b>		<b>5,705</b>	

### Development Options

During the preparation of the feasibility study, a number of site and facility options to accommodate NOSOA have been considered. High level planning focused on two fundamental options to accommodate the proposed school of architecture:

- Renovation of an existing building
- Development of a new facility

These approaches are considered as generic options without concluding on specific sites or existing buildings.

### Renovation

Conversion and renovation of an existing building and site to accommodate NOSOA assumes that any existing building will:

- Require significant renovations and upgrades of building systems
- Provide a compliment of spaces that accommodate functional requirements
- Provide an inspiring environment

A variety of existing sites and buildings within the downtown core could be considered as appropriate renovation sites. A renovation scheme assumes the following:

- Extensive demolition of the portions and the existing building including section of the existing building structure to permit construction of new components and systems
- The provision of building additions as required to provide additional program areas for the school
- The provision of new building systems to achieve sustainable goals

## New Building

The development of a new building assumes the new facility will require:

- Demolition of an existing building and /or clean up of environmental conditions to make way for new construction
- The incorporation of extensive sustainable building systems in order to achieve the highest LEED rating possible

Preliminary analysis reveals a minimal cost difference (less than 10%) between renovating an existing building and building new.

**This study therefore assumes new construction for the proceeding Capital Budget Analysis.**

## Capital Budget Analysis

Capital Budget	
Building	\$27,000,000
Furniture and Fixtures	\$3,500,000
Services	\$4,500,000
<b>\$35,000,000</b>	

## General Assumptions

The building is to be a tangible representation of the school's principles and aspirations. It is intended to not only inspire the students and faculty, but also the public. According to the feasibility study, the facility will play an integral role in the revitalization of the downtown. It will support and enhance existing cultural activities by providing an alternate and unique venue.

It is intended that the facility will be designed for the post-carbon era, demonstrating net-zero energy usage and minimizing its ecological footprint. The systems and construction of the building will conform to high-level standards of sustainability, aiming to surpass the LEED platinum requirements.

This preliminary capital budget is prepared without the benefit of specific site knowledge and with only limited building program information. It is based only on probable conditions affecting the project and an educated assessment of the magnitude cost of both building and site. It represents the summation of all identifiable project elemental costs.

The analysis contained in the study provides an 'order of magnitude' cost for the project with a variance of +/-15%. Although every attempt was made to reflect present market conditions, numerous factors could ultimately affect the final building budget. The actual marketplace (and actual price of the project) will not be known until the results of tenders have been received.

## Exclusions

- Escalation beyond fall 2010
- Land acquisition
- Demolition of existing building
- Environmental / hazardous material consulting / removals
- GST

## Considerations

- All costs are estimated on the basis of competitive bids being received from general contractors and all major subcontractors and suppliers
- Preliminary costing anticipates construction to begin in the Fall 2010. Costs as a result of escalation beyond Fall 2010 have not been included in this cost analysis.
- It should be clearly noted that the preliminary capital budget includes both design<sup>2</sup> and construction<sup>3</sup> contingencies
- The unit rates used in the preparation of this cost analysis include labour and material, equipment, as well as subcontractor's overheads and profits
- Provincial Sales Tax is included, where applicable. Goods and Services Tax is not included.

## Economic Impact of Capital Development

### Financing Alternatives

According to the study, the best case scenario would be that the project is entirely funded with newly allocated funds from outside of the region. If the project simply uses funding that would otherwise be spent on a capital project in the region by, for example the federal government, those funds cannot be counted as a benefit produced by NOSOA. If, on the other hand the project attracts funds for construction that would otherwise be spent in another region, the project has a net positive effect although it might have no effect at the provincial level.

### Construction and Design Alternatives

In the best case for the local economy, all the design, construction and furnishing of the facility is undertaken by firms within the boundaries of the City of Greater Sudbury and the land used is locally owned. In that case, the entire cost of the project is invested locally.

The study reports that the construction phase will have its impact before the school opens its doors to students. The Provincial TREIM model predicts that the City will take in \$2 million in tax revenue during the construction phase. Increases in property values are expected to increase property tax revenue by at least \$500,000 per year by the time NOSOA is in full operation.

### Impact Estimates

For this stage in developing the school, an estimate of the local effects of the construction was generated using the Ontario Ministry of Tourism's TREIM<sup>4</sup> model. The TREIM model incorporates standard assumptions for a capital project for which land has already been assembled. It generates the following estimates for a project of NOSOA's size in Sudbury. Note that some effects are indirect and some do not fall in the same year that the expenditure occurs.

### Impact of the Capital Development Phase

	Sudbury	Ontario
Cumulated Direct, Indirect and Induced Local GDP	\$24,552,117	\$1,521,222
Cumulated Direct, Indirect and Induced Local Labour Income	\$16,717,687	\$991,011
Employment (Person Years)	303	19
Federal Taxes	\$6,106,534	\$328,420

<sup>2</sup> The *design contingency* is included to address potential unknowns during the design stages and to address re-measured items/quantities as well as design development revisions. This contingency may be reduced as more detailed design information becomes available enabling more detailed cost estimates to be prepared.

<sup>3</sup> The *construction contingency* is included to address potential adjustments and increases in construction costs resulting from unforeseen project and site conditions, design changes during construction, etc.

<sup>4</sup> The values produced by the TREIM model are plausible. The predicted effect of \$2,030,753 on municipal taxes should be understood as a reasonable estimate and not as a firm prediction.

Provincial Taxes	\$4,963,415	\$247,179
Municipal Taxes	\$2,030,753	\$75,488

## Financial Analysis

When fully operating, NOSOA will have a considerable effect on Sudbury's income and employment. **The initial impact will flow through two channels: University spending and student direct spending (see table below).**

Overall income for Sudbury is conservatively expected to rise by almost \$15 million per year according to the feasibility study. This estimate does not include job creation resulting from adding new talents to the labour pool. Nor does it include the impact on tourism and other local businesses as a result of the upgrading of the city's core area.

The following section outlines predictions as to the Operational costs and Revenues from 2007 to full and on-going operations.

University Revenue and Expenditure		
FA	Fee Revenue, Architecture	4,000,000
FO	Fee Revenue, Other Students	135,000
	University Revenue from Books & Tuition	130,000
FA+FO	<b>Total Fee Revenue</b>	<b>\$4,135,000</b>
B	BIU Revenue	3,200,000
B+FA+FO	<b>Enrollment Related Revenue</b>	<b>\$7,335,000</b>
A	Local Expenditure by University	\$6,000,000
Student Direct Expenditure		
	Architecture Student Expenditures	8,000,000
	Total	
	Non-Architecture Student Expenditures Total	3,000,000
B	Housing Expenditure	1,700,000
C	Student LOCAL Spending Net of Fees and Housing	3,000,000
B+C	<b>Total Student Spending</b>	<b>\$4,700,000</b>
A+B+C	<b>Direct New Spending</b>	<b>\$10,700,000</b>
	<b>Expenditure Impact</b>	<b>\$15,000,000</b>
	(A+B) x Expenditure Multiplier + C	

## Economic Impact on the City

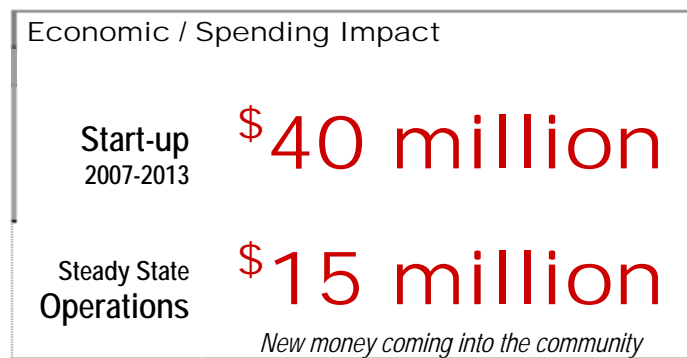
As stated in the study, NOSOA will result in increased tax revenue for the City of Greater Sudbury as a result of increased commercial and residential property values. The effect will be concentrated in the downtown but will spill over to most of the

region. In addition, based on the experience in other university towns, the presence of NOSOA will also stabilize property values in the downtown and surrounding area<sup>5</sup>.

There are three main paths through which tax revenues increase. New housing will be required, residential property values near the downtown will rise, and the value of commercial properties in the core will rise. If NOSOA makes the city more attractive it may result in retaining or attracting additional retirees. Furthermore, if NOSOA strengthens local industry it will result in additional jobs and tax revenues

The precise effects depend on a variety of factors, including the state of the local economy and council policies. It is possible to roughly estimate the size of the effect by considering alternative scenarios.

When in full-operation, NOSOA will attract 401 architecture students annually, and will require roughly 20 new faculty members. It will also create at least 10 additional jobs in the retail and recreation sectors. Holders of these jobs and some students will have families. Assuming that these new residents will live five-to-a-house or 2 to an apartment, housing a minimum of 480 new people (427 new students *total* to Laurentian University plus their spouses and children) will require at least 100 additional houses or 240 additional suites.



The above numbers are summaries from pp68-69 of the feasibility study

## All Multi-unit Housing

The simplest scenario is for the private sector to provide this housing by constructing apartment buildings. Each unit adds \$50,000 to the city's assessment base<sup>6</sup>. The tax rate on apartment buildings is 3% per year. **The tax revenue would be \$360,000 per year<sup>7</sup>.**

## Rental Accommodation in Existing Housing

Alternatively students might be housed in existing housing surrounding the downtown. In Cambridge, 90% of the students live within a 10 minute walk of the architecture school. It was assumed that five students to a house would require 80

<sup>5</sup> BusinessWeek.com worked with Onboard, a local real estate information specialist, to find out how college towns are doing in the slumping US housing market. They selected towns with long-established, first-rate colleges and found that 17 of 25 college towns outperformed their respective states in terms of home price appreciation last year. Four towns performed as well, and only four towns underperformed. ([http://news.yahoo.com/s/bw/20080314/bs\\_bw/mar2008bw20080313093883](http://news.yahoo.com/s/bw/20080314/bs_bw/mar2008bw20080313093883))

<sup>6</sup> The estimate of the effect on assessments was provided by the City's assessment officer.

<sup>7</sup> This ignores school tax revenues that do not accrue to the city but which should be counted as a benefit.



houses within walking distance of the downtown. Since NOSOA will add people to the population, the current residents would move to homes of at least equal value elsewhere in the city. The result would be that 80 new houses would be built for residents who move. Combined with the additional housing required for faculty, staff and employees in jobs induced by NOSOA, the total number of houses required would be approximately 100. **Tax revenue would be between \$2,000 and \$3,000 per house or between \$200,000 and \$300,000 per year.** This is in the same range as the revenues from apartment construction.

Depending on location, the servicing costs could be substantial, offsetting the revenue gain. Infill housing would incur very limited servicing costs. If population were to decline the additional revenues would help to finance services to existing residents who would otherwise face increasing service costs.

### Effect on Other Residential Property

Demand for 80 houses within a 10-minute walk of downtown, or 1.2 kilometres would influence property values for at least 100 city blocks. If each block contains 20 properties, the study assumes that there are 2,000 properties worth on average \$150,000. The total property value exposed to the pressure of student housing is then \$300 million. It is not unreasonable to expect the value of housing in this area to rise by 10% as a result of the new demand for student housing near the core and the increased attractiveness of the core due to NOSOA itself.

The result would be to add \$35 million, or the equivalent of 200 additional homes to the value of properties in the near-core. **This spill over effect would increase property tax revenue by at least \$300,000,** with no additional servicing costs.

### Effect on Commercial Property

The study indicates that estimating the effect on commercial properties in the downtown is difficult. Property in the core currently yields far below its potential. An expanded daytime population and increased evening use would not only strengthen commercial activities directly, but would tend to attract additional young people to the downtown during the evenings. Only part of this would be new demand, but the effect of concentrating activities would encourage downtown redevelopment and perhaps increase tourist visits.

Municipal Taxes	
Start-up 2007-20013	<b>\$2.6 million</b>
Steady State Operations	<b>\$0.5 million</b>

The above numbers are summaries from pp68-69 of the feasibility study

### Property Taxes for the NOSOA Building

Educational facilities do not pay taxes to the city, but the city receives a grant in lieu of taxes from the province. The grant is small, however – currently \$75/head - amounting to a little over \$3,000 per year. If the building is leased rather than owned by the university, however, property taxes must be paid. Under the Metro Center Community Improvement Plan, however, the full revenue effect will not be realized until the 10-year grant period ends.

Incremental assessment will depend whether NOSOA renovates or replaces an existing building or builds on an empty site. There will be an increase in potential assessment whatever site is chosen, although the increase may not be realized as increased property tax revenues for the reasons outlined above.

The study indicates that there will, however, be an increase in the value of neighbouring properties roughly equal to the value added directly by NOSOA. NOSOA's projected construction costs approach \$30 million. **It is unlikely that direct and indirect assessment increases could be less than \$10 million, providing a tax windfall of at least \$300,000 annually**

## Total property tax impact

The estimates outlined in the study are very rough, but they point to **long run tax revenues between one-half and one million dollars annually**. Therefore, any investment of capital funds made by the City of Greater Sudbury will see a significant annual return.

## Economic Summary

As demonstrated in the feasibility study, the Northern Ontario School of Architecture will make significant contributions to the economies of the Nation, the Province, the Region and the City. Of these beneficiaries, the Region and the City will reap the most important financial benefits from the school's establishment. In terms of dollars, NOSOA will provide to the City much more than it will require. **A one-time capital investment of \$35 million is quickly paid back through an injection of over \$15 million new dollars each year thereafter.** In terms of improving the social, cultural and physical environments of Northern Ontario, its contribution will be immeasurable.

## Do the project proponents represent suitable partners for the City?

The following list represents the original steering committee, including City staff that have been involved throughout the process. Representatives from Laurentian University have been participating on the committee since a very early stage and continue to offer guidance throughout their approval processes.

### Original Steering Committee

Blaine Nicholls, Committee Chair  
Robert F. Bourgeois, Vice President Administration, Laurentian University  
Kate Bowman, Project Manager, NOSOA  
Jean-Mathieu Chénier, Business Development Officer, GSDC  
Harley d'Entremont, Vice President Academic (Francophone Affairs), Laurentian University  
Janet Gasparini, City Councillor, Community Member  
Rick Haldenby, Director, University of Waterloo School of Architecture  
Tim James, Architect, Castellan, James + Partners, Community Member  
Maureen Lacroix, Community Member  
Jeff Laberge, Architect, J.L. Richards & Associates Limited, Community Member  
Dr. Jeff Lederer, General Manager, University of Waterloo School of Architecture  
Helen Mulc, Manager of Business Development, GSDC  
Dr. David Robinson, Associate Professor, Economics, Community Member  
Dr. Derek Wilkinson, Associate Professor, Sociology, Community Member

Some members of the original steering committee are in the process of incorporating into a not-for-profit legal entity. The founding directors include: Blaine Nicholls, Derek Wilkinson, David Robinson, Maureen Lacroix, Tim James, Jeff Laberge, and Janet Gasparini.

### Laurentian University

Laurentian University is Northern Ontario's leading institution for professional and graduate training. Established in 1960, Laurentian provides both English and French programs. The University also describes itself as a tri-cultural institution because of the strong First-Nations participation.

Laurentian boasts a new School of Education and in collaboration with Lakehead University in Thunder Bay Laurentian features Canada's newest medical school. It is also a national center for mining, geological and environmental research with such programs as the Cooperative Ecology Unit and its partnership with the Sudbury Neutrino Observatory.

Notable in Laurentian's curricular repertoire is the progressive Professional Schools with a "long-standing tradition of excellence with a strong emphasis on the integration of theory, research and practice."<sup>8</sup> The programs, which currently include Schools of Nursing, Education and Social Work, pride themselves on preparing students for challenging careers in the real world.

## Are the potential risks associated with a failure of the project acceptable?

The potential risk to the City is minimal since the financial contribution would be conditional upon the following:

- Laurentian University's Senate and Board of Governors approve the program and curriculum
- The Ministry of Training Colleges and Universities agrees to fund the new program
- The Provincial and Federal governments contribute to the capital costs
- The school of architecture be located in or near the downtown
- The monies be spent on the capital component of the project only

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<sup>8</sup> Professional Schools Website, Laurentian University. [www.laurentian.ca/Laurentian/Home/Departments/Dean+of+Professional+Schools/](http://www.laurentian.ca/Laurentian/Home/Departments/Dean+of+Professional+Schools/)