

City of Greater Sudbury

Therapeutic Pool Feasibility Study

January 21, 2014





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LIMITATIONS

This report was prepared by Monteith Brown Planning Consultants Ltd. and Yallowega Belanger Architecture (herein referred to as “the Consulting Team”) for the account of the City of Greater Sudbury. The material in this report reflects the Consulting Team’s best judgment in light of the information available to it at the time of preparation. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. The Consulting Team accepts no responsibility for damages, if any, suffered by a third party as a result of decisions made or actions based on this report.

Executive Summary

The purpose of this report is to provide guidance to the City of Greater Sudbury for the design, construction, and operation of an indoor aquatic facility (therapeutic pool) at the Lionel E. Lalonde Centre. The study defines the market area and community needs, analyzes current and projected demographics, proposes a facility concept, and forecasts usage. Estimates of the potential capital and operating financial impact are provided, along with planning parameters such as the types and sizes of spaces required.

With the aging population, there is an increasing demand for therapeutic pools and programs aimed at rehabilitation/recovery and low-impact exercise. Demand is also expected to rise with the increasing rate of joint replacement surgeries and the long term therapy requirements they bring. Exercise programs such as aqua fitness and water aerobics are an increasingly significant component of aquatic participation and a therapeutic pool can be used for some of these activities. On the other hand, as the number of children and youth has decreased in recent years, the demand for swimming lessons – a significant revenue generator for City pools – is waning.

In orienting the scope of the project to a therapeutic pool (possibility with leisure elements) – which would be a unique public service in Greater Sudbury – the City has an opportunity to serve a new market, albeit a smaller one than traditional aquatics. By minimizing the scope of the project (e.g., smaller than a traditional multi-tank aquatic facility), the City has also limited its capital and annual operating contribution, although annual deficits remain a reality.

The degree of success that this project achieves – both financially and in terms of personal and community health and wellness – depends heavily on the participation of those living in the secondary market (the balance of the City of Greater Sudbury beyond the former municipality of Rayside-Balfour). On its own, the Rayside-Balfour area's population is smaller than the typical threshold for municipal aquatic facility provision; however, what is being proposed would be a unique amenity within the City. This project will deliver numerous community and personal benefits to those residing in the Rayside-Balfour area and is a synergistic fit with the Lionel E. Lalonde Centre's other leisure components.

One outcome of this Study is to identify possible financial implications of providing this level of service, and it is clear that the cost to build and operate the facility comes with a cost, as do all municipal pools. This Study provides City Council with information to aid in their decision of whether or not this facility is within the desired range of affordability.

As Council makes that determination, the following observations, findings, and recommendations may be helpful:

1. The provision of a therapeutic pool, with or without leisure components, is "on trend" with aquatic facility designs in many other communities. Warmer water, accessible features, and post-recovery aquatic rehabilitation programs are highly appealing to the City's aging population, as well as infants/young children, persons with disabilities, those recovering from injuries, or those with a variety of health conditions. Given these target markets, therapeutic pool demand should continue to rise over time.
2. The Lionel E. Lalonde Centre is a suitable location for the construction of the proposed facility. The Centre is of an age and design that can accommodate this expansion and the proposed aquatic facility addition would supplement the fitness operation and gymnasium on site. However, it is important that there be a cohesive vision for the entire complex, one that reflects the multi-use aspect of the facility and that derives economies of scale. To achieve these efficiencies – such as a joint reception desk for the fitness

centre and pool – additional facility reconfiguration options may need to be explored. The City should also assess potential impacts and operating and programmatic synergies of this project on the Centre's existing fitness centre and associated operations.

3. Much of the project's success is dependent on the participation of those living in the secondary market, outside of the host community. Although locating the facility within a larger population centre would provide greater certainty of usage and financial performance, the proposed location in Azilda is within an acceptable range of travel for the majority of residents in the City of Greater Sudbury (with much of the travel being on a 4-lane highway). Nevertheless, it is very important that the pool be a quality facility in both design and operation so that it will be a significant attraction for local residents as well as those in the rest of the City.
4. Based on the demand assumptions contained in this report (which were established based on common industry measures; local market research was beyond the scope of this study), there is an adequate level of support for the City to strongly consider implementing either Option A (Therapeutic Pool – Stand-alone) or Option B (Therapeutic / Leisure Pool). The decision to move forward with either option should be made in light of other municipal priorities, with consideration of costs (capital and operating), the condition and use of existing aquatic facilities, public and stakeholder support, and alignment with other corporate strategies and community needs.
5. The selected therapy pool option should contain the following features:
 - Warmer water (approximately 32 to 34 degrees);
 - Programming that focuses on post-recovery aquatic rehabilitation programs and swim lessons for younger children;
 - A small active living studio for dryland programs to complement the existing fitness centre and gymnasium;
 - Additional change room facilities (as well as a family change room in Option B);
 - Lobby, office, storage, and mechanical space; and
 - All activity and support spaces should be fully accessible (i.e., barrier-free).
6. The design option that would accommodate the widest range of opportunities and thus serve greatest number of residents is Option B: Therapeutic/Leisure Pool Facility. The estimated cost to construct Option B is approximately \$1.15 million more than Option A and about \$65,000 per year more to operate. Because of the superior aquatic opportunities offered by this design, Option B is preferred over Option A.
7. The City should budget an amount of \$4.7 million for the construction of a Therapeutic / Leisure Pool at the Lionel E. Lalonde Centre (Option B); this amount could be offset by fundraising, partner contributions, or other funding sources. This amount is stated in current year dollars and does not include lifecycle repairs or upgrades to other parts of the building.
8. The City should budget an amount of \$279,000 annually for operating the Therapeutic / Leisure Pool (Option B), with modest annual increases to this amount.
9. Prior to full implementation of this Study, it is recommended that the City undertake targeted consultation with the community and potential stakeholders to more fully define the parameters of the project as well as possible partnership opportunities.
10. Successful construction and operation of this facility will require the participation of partners. Health care providers – physiotherapists in particular – are one potential provider that may be interested in using or leasing space at this facility. The City is advised to explore possible partnerships with outside

organizations through the issuance of an Expression of Interest and to evaluate these interests utilizing a standard partnership framework.

11. The timing of facility development should proceed when funding allows and with consideration to other municipal priorities. In implementing this direction, initial tasks would include budgeting funds, starting early stage designs, obtaining public input, securing partnerships, and developing a marketing and fundraising strategy.
12. The development of a Therapeutic/Leisure Pool (the larger of the two options) should, at a minimum, trigger a review of other municipal pools, with the closure of an aging and/or under-performing pool being one possible outcome. The City is currently updating its Parks, Open Space & Leisure Master Plan which may provide additional direction in this regard.

1. Introduction

1.1 Study Purpose

In November 2013, a Consulting Team led by Monteith Brown Planning Consultants was retained by the City of Greater Sudbury to prepare a Therapeutic Pool Feasibility Study to identify the potential need and viability for the development of an indoor aquatic facility at the Lionel E. Lalonde Centre in Azilda to serve both the community and act as a tourism draw. This Feasibility Study explores two indoor aquatic facility types:

- Option A: Therapeutic Pool – Stand-alone
- Option B: Therapeutic/Leisure Pool

The creation of a new pool facility in the former Rayside-Balfour area has been a community vision for some time. At the request of the local Ward Councillor, the development of a therapeutic pool project plan was listed as a Healthy Community priority project in the City's 2012-2014 Strategic Plan. The first project plan phase is the completion of this Feasibility Study, to be followed by the identification of funding partnerships. The City has not yet allocated funding for the construction and operation of this facility.

In recent years, the City has emphasized its interest in active living and healthy communities by promoting and providing easily accessible opportunities for all members of our community. Time and again, indoor aquatic components are rated amongst the most desirable leisure facilities as they serve the entire spectrum of residents. Aquatic activities offer inherent community benefits and are one indicator of a high quality of life as swimming is a key life skill that can also improve personal health and wellness. Therapeutic activities are increasingly popular with the growing proportion of aging active baby boomers and seniors, which underscores the importance of year-round indoor aquatic facilities.

The Lionel E. Lalonde Centre in Azilda has been pre-selected as the candidate site for the development of this facility. In 2011, a preliminary assessment of adding an indoor pool to this facility (at a cost of \$4.8 million based on a 7,600 square foot addition) was completed. The Feasibility Study will test the assumptions from this prior assessment and develop an action plan for implementation with a focus on cost impacts and potential partners.

Specifically, this Feasibility Study sets out to complete the following:

- Examine relevant studies, research, trends and best practices
- Identify community needs for specialty indoor aquatic facilities and programming
- Relative to the proposed facility:
 - establish a preliminary space programme
 - develop conceptual designs
 - discuss partnership considerations
 - prepare capital cost construction and annual operating cost estimates

This Study is being undertaken concurrently with a review of the City's Parks, Open Space & Leisure Master Plan and benefits from the preliminary findings from the aforementioned initiative. It bears noting that there are several items beyond the scope of this assignment, including engineering audits/inspections (existing studies are being relied upon), public and stakeholder consultation (the City may pursue this through a subsequent stage of

analysis), the identification of economic benefit / market analysis, the identification of funding sources and financial capacity, partner solicitation, and detailed design.

1.2 Study Organization

This Feasibility Study is organized into the following sections:

Section 1: Introduction

Describes the Feasibility Study's purpose and organization.

Section 2: Market Analysis

Contains a brief summary of the community, the benefits of therapeutic and leisure pools, key trends, best practices, and facility models in other communities.

Section 3: Program Analysis

Investigates potential program demand for the proposed facility.

Section 4: Proposed Facility Concept

Identifies two options (Option A and B) for the proposed facility concept, including facility design considerations. Also examines the characteristics of the existing site and facility to ensure the appropriate siting of the proposed amenities.

Section 5: Business Plan

Contains the capital construction cost and annual operating cost estimates for the proposed facility concepts, with consideration given to programming and staffing models and usage/demand analyses.

Section 6: Implementation

Explores potential management, partnership opportunities, and promotion/marketing priorities.

2. Market Analysis

Understanding the existing socio-demographic and market conditions in the City of Greater Sudbury and the local community surrounding the proposed site is vital to evaluating local aquatic needs, as is an understanding of aquatic facility design and utilization trends. This section provides a brief overview of the area's demographic characteristics and a look into the benefits of therapeutic and leisure pools, followed by key trends and an exploration in best practices of facility and program provision found in other communities in Ontario.

2.1 Community Profile

The City of Greater Sudbury is a large regional urban centre located in Northern Ontario. With an area of over 3,200km², it is the largest city by area in Ontario. Formed through municipal amalgamation in 2001, the City is comprised of the former Regional Municipality of Sudbury (Sudbury, Capreol, Nickel Centre, Onaping Falls, Rayside-Balfour, Valley East and Walden), as well as several unincorporated townships.

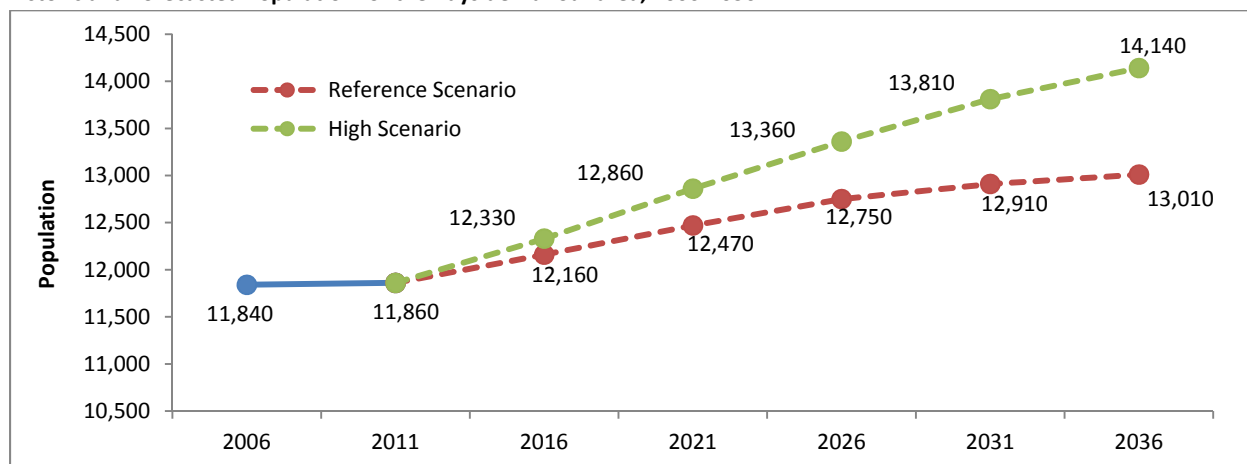
While this Feasibility Study considers needs across the entire City of Greater Sudbury (as the proposed facility may attract a regional market), the focus of this assignment is the community of Azilda (in the former Town of Rayside-Balfour) as this is the proposed location of the pool. Azilda is centrally located in the City of Greater Sudbury and is approximately 14 kilometres northwest of the former City of Sudbury and 8 kilometres southeast of Chelmsford.

The following community profile has been developed to more closely examine socio-demographic characteristics that may influence the provision of a therapeutic pool in the Rayside-Balfour area.

Historic and Projected Population

In 2011, the population of the Rayside-Balfour area was 11,860, a growth of 20 persons from the 2006 population. Of this amount, the reported population of the community of Azilda was approximately 4,300. Rayside-Balfour is the third largest former municipality in Greater Sudbury, following Sudbury and Valley East. As illustrated in the following graph, the population of Rayside-Balfour is expected to increase by an additional 10% to 19% by 2036 based on the Reference and High Scenario Forecasts.

Historic and Forecasted Population for the Rayside-Balfour area, 2006-2036



Source: City of Greater Sudbury. Growth Outlook to 2036. Draft, May 2013. Hemson Consulting Ltd.

Housing growth in Rayside-Balfour is anticipated to increase during the next 25 years. Single and semi-detached dwellings will continue to be the most dominant housing type in the community, adding nearly 500 new units by 2036, followed by apartments (150 new units) and row housing (116 new units).

Looking at a broader market, the 2011 population of the entire City of Greater Sudbury is 166,300 (figure adjusted for net undercoverage). In the next 25 years, the City of Greater Sudbury is expected to continue to see growth in its population; however, the amount of which will depend on the level of economic and employment growth. The more conservative outlook (Reference Scenario) forecasts the City's 2036 population to be 176,800.

Population by Age Group

Notable changes in Rayside-Balfour's age structure are anticipated to occur over the next 25 years. As illustrated in the following table, youth (ages 10 to 19), mature adults (ages 35 to 54), and older adults (ages 55 to 69) are expected to decline by 13%, 6%, and 17% respectively. This finding aligns with national aging and City-wide trends and demonstrates the movement of the baby boom and baby boom echo generations through various life stages. Conversely, the group of seniors (age 70+) in Rayside-Balfour is expected to grow by 152% between 2011 and 2036 as the baby boom cohort enters their senior years.

Reference Forecast for the Rayside-Balfour area – Population by Age Cohort, 2011-2036

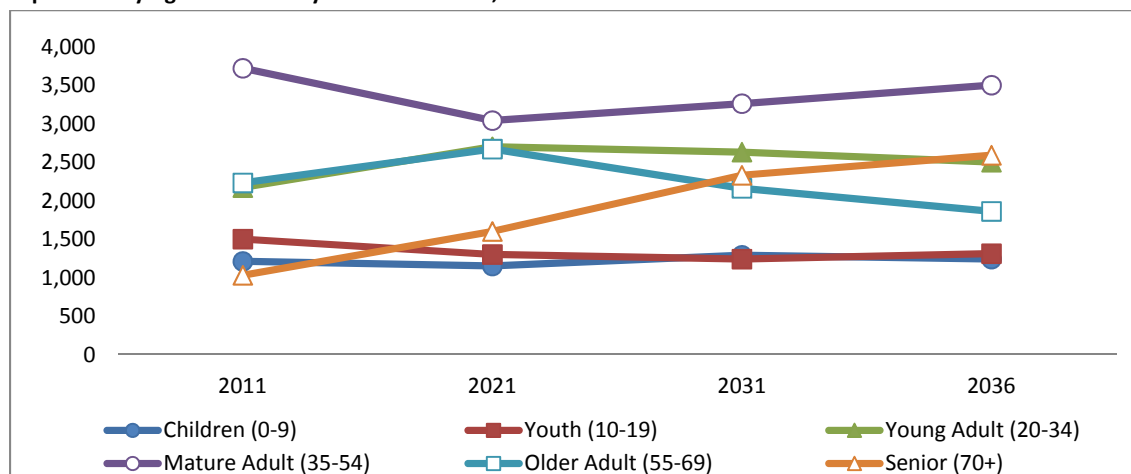
	2011	2021	2031	2036	Growth (2011-2036)	
Children (0-9)	1,210	1,150	1,290	1,240	30	2.5%
Youth (10-19)	1,500	1,300	1,240	1,310	-190	-12.7%
Young Adult (20-34)	2,170	2,700	2,630	2,500	330	15.2%
Mature Adult (35-54)	3,720	3,040	3,260	3,500	-220	-5.9%
Older Adult (55-69)	2,230	2,670	2,160	1,860	-370	-16.6%
Senior (70+)	1,030	1,600	2,330	2,590	1,560	151.5%
Total	11,860	12,460	12,910	13,000	1,140	9.6%

Note: Totals may not add due to rounding.

Sources: Statistics Canada, 2001-2006; adjusted for net under-coverage by Monteith Brown Planning Consultants.

City of Greater Sudbury. Growth Outlook to 2036. Draft, May 2013. Hemson Consulting Ltd.

Population by Age Cohort – Rayside-Balfour area, 2011-2036



Source: City of Greater Sudbury. Growth Outlook to 2036. Draft, May 2013. Hemson Consulting Ltd.

On a City-wide basis, the aging of the population is very apparent. Greater Sudbury's median age increased from 38.9 years in 2001 to 42.3 years in 2011, which is greater than the Provincial median of 40.4 years. Due to the dominance of the baby boomer cohort, the City has a disproportionately large population of mature and older adults. Population forecasts suggest that the City's senior age group (age 70+) will increase by 94% between 2011 and 2036, which is a slower growth rate than what is projected for Rayside-Balfour, but still represents an increase of approximately 17,000 seniors in the next 25 years.

While swimming pools are capable of serving all age groups, their design and operation can be tailored to specific activities that may target specific markets. As is discussed further in the section on trends, the growing population of seniors is likely to have an interest in lower-impact, warmer-water aquatic activities, including those that have therapeutic value. Conversely, children tend to be the primary market for swimming lessons, while competitive swimming tends to be dominated by youth (although masters swimming represents a modest but growing market). The lack of any substantive growth in the child and youth age groups – on a City-wide basis, no growth is forecasted for children ages 0 to 9, while youth ages 10 to 19 are expected to decline by 8% – suggests that demand for aquatic opportunities for these markets is likely to be relatively stagnant during the projection period.

Income

Studies have shown that income is an indicator of participation levels in recreation and leisure activities, with higher incomes generally being suggestive of higher levels of participation. According to the 2011 National Household Survey, the City of Greater Sudbury's median income for individuals (age 15 and over) and median household income were 8% and 6% higher than the Provincial medians, respectively. This suggests that participation rates in aquatic pursuits in Greater Sudbury should generally be in line with provincial rates, but that affordability will remain a key objective. There will be a need to continue to actively engage residents of all income groups to ensure that leisure opportunities are affordable. Many municipalities (including Greater Sudbury) and organizations have established (or have access to) subsidy programs to assist those with financial barriers to accessing recreation and leisure opportunities.

2.2 Regional Pool Inventory

There are currently five municipal indoor aquatic facilities located throughout the City that offer a range of aquatic and leadership programs in addition to recreational swims. Some form of aquatic therapy class is offered at each of the existing facilities. The locations of each indoor aquatic facility can be found on the following figure. Utilization at each of these facilities is discussed in greater detail in Section 3.

Municipal Pool Inventory

Howard Armstrong Recreation Centre

The Howard Armstrong Recreation Centre is located in Val Therese and boasts a single tank measuring 25 metres long and 15 metres wide in addition to a hot tub. The pool depth ranges from 1.06 metres to 3.81 metres and the temperature is maintained at 30 degrees Celsius. Other supporting amenities at this facility includes a pool ramp, steps, and change rooms, in addition to a cardio and weight room, squash courts, and indoor walking track. Public swimming opportunities include family swim, adult swim, and lane swim periods. 20 different aquatic swimming lessons are also offered at this location.

Onaping Falls Pool

The Onaping Falls Pool serves the northwest portion of Greater Sudbury and features a single tank measuring 12 metres long and 5 metres wide; there is no accessibility ramp or chairlift at this pool. The pool depth ranges from 1.06 metres to 3.40 metres and the water temperature is maintained at 30 degrees Celsius. Other amenities located at this facility include change rooms, gymnasium, and indoor walking area. Public swim times are available in addition to family swim, adult swim, and senior swim. 18 different swim lessons are also available at this location.

R.G. Dow Pool

The R.G. Dow Pool is located in Copper Cliff, approximately 4 kilometres from the Gatchell Pool. This facility offers a single tank that measures 25 metres long and 12 metres wide with supporting change rooms and a pool chairlift. The pool depth ranges from 1.06 metres to 3.65 metres and the water temperature is maintained at 30 degrees Celsius. In addition to public swim, family swim, and adult swim, 23 aquatic lessons are available at this location.

Gatchell Pool

The Gatchell Pool is located in the former City of Sudbury and provides a single tank measuring 25 metres long and 15 metres wide with supporting change rooms and a pool chairlift. The pool depth ranges from 1.06 metres to 3.81 metres and the water temperature is maintained at 30 degrees Celsius. In addition to public swimming, other swimming opportunities are available including family swim, adult swim, lane swim, and female only swimming. 24 different aquatic swimming lessons are also offered at this location.

Nickel District Pool

The Nickel District Pool is located in the former City of Sudbury. This facility provides a single tank measuring 25 metres by 10 metres wide. The pool depth ranges from 1.0 metre to 3.0 metres and water temperature is maintained at 32 degrees Celsius. Supporting pool amenities include change rooms, stairs, a ladder, and a chairlift. Public swim, family swim, and adult swim are available at this location, as well as 20 swimming programs.

Non-Municipal Pool Inventory

In addition to the five municipal aquatic facilities described above, there are several non-municipal facilities in Sudbury that offers an indoor aquatic facility. Given the operational nature of non-municipal facilities, public access may be limited. These facilities are described below.

Health Sciences North

The Health Sciences North (HSN) provides a therapeutic pool that measures 7.5 metres by 4.3 metres (approximately 350 square feet) and a depth between 0.8 metres to 1.4 metres. The temperature is maintained at 34 degrees Celsius and programming is provided by HSN to patients and the public who are recovering from an injury or those with a medical or physical condition. In 2013, HSN raised \$150,000 to retrofit a Snoezelen system to the existing therapeutic pool. The Snoezelen system equips the pool with lighting and sensory stimulation equipment suitable for treating patients with autism and other developmental conditions.

Sudbury YMCA

Sudbury YMCA is located in the heart of downtown Sudbury along Durham Street and is co-located with the Centre for Life Older Adult Centre. A 20 metre lap pool and therapeutic leisure pool is located at this facility, with a pool depth ranging from 1.06 metres to 3.81 metres and pool temperature of 32 degrees. The YMCA also boasts a wide range of other health and fitness facilities including an indoor track, double gymnasium, squash courts, a wellness centre (complete with cardio and weight-training opportunities), and multi-purpose rooms.



Sudbury YMCA - indoor lap pool and leisure pool (photo source: <http://www.ncaquatics.com/recent.htm>)

Laurentian University

A 50-metre competitive swimming pool is located at Laurentian University, known as the Jeno Tihanyi Olympic Gold Pool. This facility, which is co-located with a gymnasium and fitness rooms, boasts a 50-metre, eight-lane pool equipped with play and diving and equipment, including 1 metre and 3 metre boards, as well as 3 metre, 5 metre, 7.5 metre, and 10 metre platforms. While this facility is generally used for a number of competitive swimming, diving activities, member and non-membership based swimming opportunities are also available. This facility is also used by the Laurentian Masters Swim Club, Sudbury Laurentian Swimming Club, and Sudbury Synchro Club.



Jeno Tihanyi Olympic Gold Pool
(photo source: <http://laurentian.ca/content/facilities>)

Finlandia Village

Finlandia Village was established in 1982 and strives to provide affordable resort-like accommodations to allow Finnish residents to age in place. With 226 units, Finlandia Village boasts a range of leisure amenities including a small pool, sauna, hall/meeting space, library, and more. Public access to the pool is available based on an annual membership for open swim and aqua fitness activities. The pool measures approximately 4.5 metres by 11 metres with a depth of 1.2 metres. The temperature is maintained at about 30 degrees Celsius.

Sudbury Hotels

A search of websites finds that there are approximately 10 local Sudbury hotels that have pool amenities; however, most pools are not accessible by the public. Currently, the Sudbury Travelodge is the sole hotel that allows public access to their pool for an admission fee of \$5. Historically, the Ambassador Hotel offered public memberships for use of their pool but this is no longer the case.

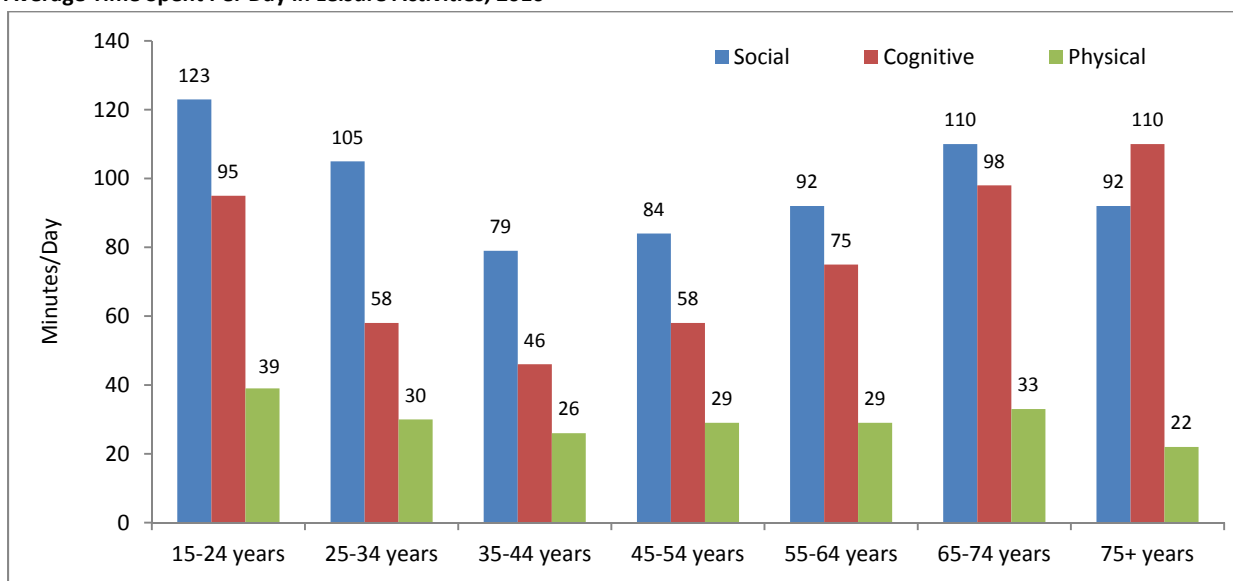
2.3 General Leisure Trends

Physical Inactivity

While the Canadian Physical Activity Guidelines suggest that Canadians ages 12 and over should spend at least 60 to 150 minutes per day engaged in physical activities, Statistics Canada reports that all age groups fail to meet this minimum. In 2010, Statistics Canada reported that teens and young adults age of 15 and 24 were the most active, spending an average of 39 minutes per day on physical activities. Seniors age 75 and over had the lowest level of physical activity. Older adults age 55 and 74 spend between 29 and 33 minutes per day in physical activity, slightly more than those age 25 to 54.

By contrast, Statistics Canada reported participation in physical inactivity, such as social and cognitive pursuits, multiple times higher than physical activities across all age groups. The 15-24 years age group spent the most time in social activities (124 minutes per day), while seniors age 75 and over spent the most time in cognitive activities (110 minutes per day).¹ The time spent in cognitive activities increases dramatically as Canadians transition into the older adult age group. A summary of how average leisure time is spent is illustrated in the following table.

Average Time Spent Per Day in Leisure Activities, 2010



Source: Statistics Canada. 2010 Active Leisure Time.

Lack of Free Time

A lack of free time is commonly identified as the number one barrier to participation and is generally the result of busy lifestyles, employment, and competing interests in Canada. Commuting, home-based occupations, night shifts and weekend work are creating the need for leisure programming to be held at varying times and more frequently during the evenings and weekends, as well as more demands for drop-in opportunities. Similarly, the evolution of the Canadian family, with many lone-parents and households with extended families, is placing significant time pressures and constraints on leisure participation. Broadly speaking, the lack of free time has contributed to other notable trends such as increased rates in obesity and chronic disease (resulting from less physical activity) and a

¹Statistics Canada. Active leisure time. <http://www4.hrsdc.gc.ca/.3ndic.1t.4r@-eng.jsp?iid=51>

desire for more flexible and convenient program options. Unfortunately, while the City cannot directly address this barrier, providing more unstructured programs and extending hours of operation are some solutions that allow people to participate at times that are most suited to their needs.

Aging Population

Many members of the 'Baby Boomer' demographic (currently between the ages of 50 and 68) are quickly reaching retirement age, contributing to a significant 'greying' of the population and placing greater demand for aquatic-based activities aimed at older adults and seniors.

29% of Greater Sudbury's population is age 55 or older. Over the next 25 years, this age group is projected to increase by 26% and to reach 34% of the total population. Much of this growth will be attributed by the 70 and over age group, which is anticipated to nearly double (and more than double in Rayside-Balfour). Many amongst these generations are shifting away from traditional seniors' opportunities towards more active pursuits, particularly quality wellness and active living activities. Aquatic therapy provides a number of affordable health and physical benefits not previously available to this age group. Aquatic facility use research suggests that the aging boomer generation will increase Masters Swim demands, and require more therapeutic and rehabilitative facilities². The growing population of older adults and seniors in the City of Greater Sudbury will increase demand for these types of age-friendly facilities.

The 'New Retirement Survey' of older adults prepared by Merrill Lynch³ contains findings that impact the provision of services to older adults in the future. Findings of the survey indicate changing expectations and perspectives of aging that remain relevant today:

- Baby boomers intend to keep working after retirement age, possibly through part-time work or launching new careers.
- Older adults will live longer and continue to pursue active activities.
- There will be a strong balance between work and personal time, and only a small percentage never plans to work again.
- Boomers are moving to put others first (e.g., family, community, etc.) instead of themselves.
- Men want to relax and spend more time with their spouse.
- Women see retirement as providing more time for career development, community involvement and personal growth.

Overcoming Challenges for Persons with Disabilities

In 2006, Statistics Canada identified that approximately 14% of Canadians and 15% of Ontarians were challenged with a disability and it is anticipated that this proportion will continue to grow. The Province has responded to this growing segment through enacting the *Accessibility for Ontarians with Disabilities Act* (AODA).

The intent of the AODA is to *"improve opportunities for persons with disabilities and to provide for their involvement in the identification, removal and prevention of barriers to their full participation in the life of the province"* (c.32, s.1). Barriers are defined to include anything that prevents a person with a disability from fully participating in all aspects of society because of his or her disability, including physical, architectural, informational,

² Ontario Aquatic Facilities Needs Analysis and Strategy. Aquatic Federation of Canada, 2007.

³ Merrill Lynch, Harris Interactive, Dychtswald, K. Ph.D. The new retirement survey, 2005.

communicational, attitudinal, technological, or policy/practice barriers. For leisure services, this could include (but is not limited to) accessibility to facilities, ramps to entrances, proper lighting, clearly marked identification signs, removal of barriers for pedestrian paths and hand rails. Inclusive program opportunities may also be considered as a method of integration.

2.4 Aquatic Trends

This section outlines trends relating to aquatic facilities and participation which may influence the development of pool facilities in the City of Greater Sudbury.

Benefits of Aquatic Therapy

Therapeutic pools are generally small warm water tanks (33 to 35 degrees Celsius) that are predominantly used for rehabilitation or therapeutic purposes (e.g., people with disabilities or injuries), but they are also available to toddlers and seniors as well as those less comfortable in water. Therapeutic pools may vary in size and shape, but most have shallow depths and feature a range of supporting amenities and assisting devices including, but not limited to massage jets, benches, handles, ladders, chair lifts and resistance machines.

Highly valued for its restorative properties, aquatic therapy originates from spas and warm baths that were popular among Greeks and Romans during the 5th Century BC to supplement sporting activities, as well as rehabilitation qualities for those suffering from paralysis.⁴ The use of water was religiously viewed as a healing agent and was used to treat a variety of sicknesses and diseases.⁵ Generally speaking, aquatic therapy provides a medium for individuals to improve mobility and increase blood flow throughout the body, thereby relaxing muscles and decreasing tension.⁶ The many benefits of aquatic therapy – well documented by therapeutic recreation specialists, physical therapists, massage therapists and medical doctors – are summarized below:

Physical Benefits

- Reduces pain
- Facilitates relaxation and circulation
- Reduces pressure on joints and spine
- Reduces swelling from injured areas
- Improves mobility
- Increases cardiovascular function
- Improves balance and core
- Prevents bone marrow loss
- Increases endurance
- Improves pulmonary function
- Serves as a medium for strength training
- Improves blood circulation

Psychological Benefits

- Improves body image
- Improves quality of life
- Reduces depression and anxiety
- Improves self satisfaction
- Enhances mood
- Creates sense of Independence
- Builds self-esteem
- Create relationships with others

⁴ M. Champion. Adult hydrotherapy. Oxford: Heinemann Medical Books.

⁵ M. Irion. Historical overview of aquatic rehabilitation. *Aquatic Rehabilitation*. 3-13. Philadelphia: Lippincott-Raven Publishers. 1997.

⁶ The perceived benefits of aquatic therapy as an intervention tool. 2010. Retrieved from http://lightner.keuka.edu/files/2010/08/First_Final_paper_ch1-5.pdf on November 21, 2013

Further to the above, aquatic therapy provides rehabilitation benefits for individuals with a variety of medical conditions. For example, one study found that aquatic therapy exercises delayed the effects of multiple sclerosis.⁷ In addition, aquatic therapy can also benefit those with:

- Arthritis
- Fibromyalgia
- Osteoporosis
- Back pain and joint degeneration
- Stroke and other neurological impairments
- Neck, back, nerve, hip, knee, and foot injuries
- Recovering from surgical procedures

Modern Pool Design

Through public investment in leisure facilities following the Second World War, public pools have been a staple in communities across Canada and continue to be one of the most sought after facilities given their intangible benefits. Toted as one of the most popular leisure activities in Canada and a “cradle to grave” activity, swimming is an essential life skill that all residents should have access to. While private backyard pools provide similar leisure activities, public pools offer a range of programming opportunities and also serve as a venue for neighbours to gather and form community ties.

Traditional pool layouts were generally limited to a rectangular shape with a length of 25 metres (or in some cases 25 yards). However, recent trends in pool construction and retrofitting have seen an evolution in public pool design that offers more variety and that accommodates a growing diversity of users, thereby raising the bar in facility quality. Municipalities across the Province are responding to demands for modern amenities, including, but not limited to, installing family change rooms, providing warmer pool temperatures, adding waterplay features, and updating viewing galleries, washrooms, and showers.

Research suggest that many residents are interested in high quality aquatic facilities (often characterized by warm water tanks, water park features, spacious decks and change facilities, etc.) that offer recreational swimming opportunities. In some larger communities, requests have also been received for salt water pools (in place of chlorine or ozone), wave pools, platforms and deep wells for competitive diving, and 8-lane 50 metre (Olympic) pools for competitive swimming.

In modern aquatic facility designs, a secondary tank is commonly paired with the traditional rectangular pool to expand leisure and recreational opportunities, while still accommodating lane and/or competitive swimming. Though usually smaller and shallow, the secondary tank has no predefined shape or size and many are uniquely designed from one location to another. This tank can serve a number of purposes including a leisurely lounge tank with associated water slide and spray features, a warm water tank to facilitate programming for older adults and those with disabilities, or a tot-teaching tank that provides a safe and comfortable environment suitable for younger learn-to-swim users. Movable floors and/or bulkheads can help to customize rectangular or leisure tanks for a variety of activities, including lessons and aqua-fitness programs. The most successful indoor aquatic centres include a variety of features that are designed to accommodate all ages and abilities.

Other recent trends in modern pool design components include:

- Entry ramps or stairs in place of ladders
- Family change rooms
- Spa or hot tub
- Larger shallow area
- Increased natural lighting
- Separate HVAC systems to isolate chlorine smell

⁷ E. Broach & J. Dattilo. The effect of aquatic therapy on strength of adults with multiple sclerosis. Vol. 37. No 3, 224-239. 2003.

With the advent of the leisure pool has come a new class of aquatic user – those who come for entertainment, not just lessons, programs or fitness. Although indoor pool use traditionally peaks during the winter months (particularly post-Christmas), the emergence of the leisure pool concept has helped to increase the use of aquatic facilities year-round. The chief attribute of the leisure pool is the ability to accommodate a larger number of bathers than the rectangular pool. The leisure pool suits recreational swimming (particularly amongst children), learn to swim programs, and aquatic therapy to some degree, but has not been highly popular with competitive aquatic clubs.

Aquatic facilities of any type are expensive to build – capital costs of pools can be as much as double the cost to build dry land facilities. Pool operating costs are also disproportionate to other types of recreation facilities largely because of the staff and utility costs associated with aquatic facilities.

Accommodating Persons with Disabilities

While the AODA built environment standards are not yet in place for indoor facilities (such as aquatic facilities), there are many design guidelines in place to maximize accessibility for persons with physical disabilities. Many communities have recognized the importance of removing barriers to participating in aquatic activities through design, which may include ramps, chairlifts, hand rails, and wide steps. Supporting amenities such as accessible change rooms and viewing areas are also key design considerations. The City of Greater Sudbury has also recognized the need to accommodate persons of all abilities through design considerations such as ramp entry at the Howard Armstrong Recreation Centre pool.

The AODA does not identify specific standards for the design of aquatic facilities although the City of London has developed accessible design standards for swimming pools in the 2007 Facility Accessibility Design Standards manual; other municipalities have also adopted similar standards. Some of the key design requirements identified below:

- Access from the pool deck into the water, provided by a ramp slope no steeper than 1:12
- Where steps are provided into the pool:
 - o Steps shall be marked with a colour-contrast strip of at least 50mm wide, at both the rise and the tread
 - o Colour contrasting handrails on both sides of the steps. Such handrails shall extend at least 300mm beyond the pool edge
- Where diving boards or platforms are provided, they shall be clearly marked and protected. Overhead clearances should be a minimum of 2100 mm or shall be protected by suitable guards
- Where lanes, and/or lane markers are provided, they shall be of a high contrasting colour
- Pool boundaries should be clearly defined by both a textural change and a colour contrast to both the water surface and the surrounding pavement

Aquatic Programming

Swimming is one of the most popular leisure activities given that it can be pursued by residents at any age and ability, from infants to children to adults to seniors. Because of shifting demographic profiles, aquatic programming has continually evolved to capture growing segments in the population. Coupling the aging trend with a heightened awareness for health and wellness, aquatic therapy and fitness programming for older adults, seniors, and those with disabilities are on the rise, including (but not limited to):

- Water aerobics / Aquafit
- Tai chi
- Aquatic kickboxing
- Underwater cycling
- Deepwater running
- Core strength aquatic exercise
- Warm water stretching
- Special needs programs
- Learn to swim
- Female only swim

Greater Demands for Unstructured Recreational Swimming

Residents are placing greater demands on spontaneous, non-programmed swimming activities due to evolving household schedules and lifestyles, prompting a transition from registered aquatic program to unorganized drop-in times. As evidenced in a number of communities, participation in drop-in recreational swimming programs have been on the rise in contrast to registered swimming programs that have seen a stable or declining participation rates. Consultation undertaken in other communities commonly identifies requests for additional drop-in opportunities and as a result, municipalities are increasingly faced with the need to strike a balance in the provision of structured and drop-in aquatic programs.

Competitive Swimming

Swim Ontario has indicated that enrolment in their organization has been relatively stable for several years, with approximately 10,000 swimmers under the age of 18 registered in 133 affiliated clubs across the Province. Participation in competitive swimming declines significantly at age 13. According to Swim Ontario, the major obstacle the sport faces is the lack of suitable facilities as the trend towards developing leisure pools has not been one that addresses the needs of competitive swimmers. A hybrid design or a traditional rectangular tank can be used for training. For competition a traditional rectangular tank is needed with at least 6 lanes (preferably 8 lanes), and while a 25-metre length pool is adequate, a 50-metre length pool is preferred. There are fewer than one dozen municipal 50-metre (Olympic) pools in Ontario, including one in Greater Sudbury (at Laurentian University).

Diving, Masters Swimming, Water Polo, and Synchronized Swimming are specialized competitive activities that have undergone modest growth in the past few years at a Province-wide level. These activities all have specific pool requirements, which is generally at least a 25-metre (or larger) rectangular pool. The City has several other facilities that can accommodate these activities.

3. Program Analysis

This section investigates potential program demand for the proposed facility.

3.1 Goals

In evaluating the need for indoor aquatic components for the Lionel E. Lalonde Centre and its ultimate design and program function, the following goals have been established:

- a) To improve healthy living and physical activity opportunities for residents of all ages with a focus on the growing older adult and senior populations.
- b) To provide a new aquatics amenity that is not available in other municipal facilities within the City.
- c) To create synergies with existing facility components and strengthen the Centre's role as a community hub.
- d) To encourage community partnerships that balance the needs of residents with the City's mandate.
- e) To make decisions that are financially responsible and sustainable for the City and its residents, both existing and future.

These goals are core directional statements that are intended to guide the development and implementation of this Study. They should be read and interpreted as a set, rather than as separate, isolated statements.

3.2 Pool Variations and Uses

Various sectors are involved in the provision and operation of indoor aquatic facilities, including municipal, education, health, non-profit, hospitality, and private sector interests. The target market of a facility and the operational model (i.e., costs and revenues) will dictate the type of design that is pursued. As a result, certain aquatic facility designs are common in certain sectors. For example, therapeutic pools are often associated with the health care sector, wave pools and indoor water parks are often associated with the hospitality and private entertainment sector, instructional pools are typically provided by municipalities, and competition pools are sometimes a focus of secondary and post-secondary institutions.

As pool designs evolve, there is a growing focus on multi-use designs that can accommodate multiple activities, often simultaneously. In many municipalities, the leisure pool is a term that has commonly been applied to a multi-use tank embodying a wide range of attributes, although its ultimate design can vary significantly from pool to pool. Conversely, most competition pools are guided by strict design criteria. Multiple tank complexes are also increasingly common as they are able to serve a wide range of needs; to enable a "one-stop shopping" approach and economies of scale, municipal pools are preferably co-located with other recreational or civic uses. While the design of a tank will impact its ultimate use, the temperature of the water is also a key determinant for programming and use.

While not intended to be an exhaustive list, the range of potential municipal pool design types is identified in the following table.

Typical Municipal Pool Designs

Pool Type	Description
Competition Pool	Competitive swimming meets require a 25m tank with 6 to 10 lanes. Olympic pools measure 50m in length. Rectangular tank with a minimum depth of 1m; deeper tanks can accommodate synchronized swimming, water polo, diving, etc. Water temperature is cooler (e.g., 25 to 28 degrees Celsius). <i>Local example: Laurentian University (50m), Gatchell Pool (25m)</i>
Fitness Pool	Used predominantly for length swimming, a fitness pool would be up to 25m in length, but only 3 or 4 lanes wide (not suitable for competition), possibly with a separate pod for recreational swimming. Water temperature is around 28 degrees Celsius. <i>Local example: Nickel District Pool</i>
Teaching Pool	Variable design that accommodates swimming lessons and classes, as well as casual play. May have movable floor to accommodate different depths. Water temperature is around 28 to 30 degrees Celsius. <i>Local example: None</i>
Leisure Pool	Typically free-form tank intended for recreational play by children and families. Water depth may range from 0m to 1m or more. May incorporate features such as beach entry, sprayers, water umbrellas, bucket dumps, slides, climbing walls, etc. May be stand-alone or combined with fitness or therapeutic pool to create hybrid design. Water temperature is typically around 30 to 32 degrees Celsius. <i>Local example: Sudbury YMCA</i>
Wave Pool	Rectangular or free-form tanks with mechanically generated waves. Depth typically ranges from 0m (beach entry) to 1m or more. Often developed as part of larger aquatic or entertainment complex intended to attract children and families. Water temperature is typically around 30 to 32 degrees Celsius. <i>Local example: None</i>
Therapy Pool	Modestly-sized tanks used largely for self-administered rehabilitation or therapeutic purposes. Design can also accommodate older adult aqua-fitness classes and tot swim lessons. Water temperature is typically around 30 to 35 degrees Celsius, depending on programming. Accessible entry is a must. <i>Local example: Health Sciences North</i>
Hot Tubs / Whirlpools	Small tanks (generally with capacities of 12 people or less) with very warm aerated water (up to 40 degrees Celsius) intended for relaxation. Generally not suitable for children. <i>Local example: Howard Armstrong Recreation Centre (hot tub)</i>

For this Study, the focus is on a therapy pool, possibly combined with a leisure pool; both of these would be unique aquatic components for the City of Greater Sudbury. Information on a sampling of municipal therapeutic pools in Ontario is contained in [Appendix A](#). As is discussed later in this section, there is a sufficient supply of competition, fitness, and teaching pools in the City; therefore, these do not form part of the subsequent business plan, nor does a hot tub as this would create duplication with a therapy pool.

While a wave pool was initially discussed as a potential consideration for the Lionel E. Lalonde site, it does not comply with the stated goals of this analysis and cannot reasonably be supported at this location for the following reasons:

- To our knowledge, there are only 5 municipal wave pools in Ontario (3 in Ottawa, 1 in Richmond Hill, and 1 in Windsor). Wave pools are not the type of investment most municipalities are seeking, particularly those with small to mid-size populations and limited secondary markets.
- Wave pools are predominantly provided by the private sector as part of water parks, almost exclusively in association with hotel complexes. If there is a desire to attract tourists, the lack of accommodations on-site (or for that matter in Azilda) is a critical shortcoming.
- Greater Sudbury is an aging community and while the warm water would be suitable to older adults, the wave pool environment does not promote a “therapeutic” atmosphere.
- In the municipal sector, wave pools are often provided in conjunction with other attractions, such as other pool tanks, arenas, etc. that can help to maintain a draw and/or help to offset operating costs.
- Wave pools have very high operating costs (much more than a leisure or therapy pool) due to their large water volumes, utility costs, and lifeguard ratios that are much higher than traditional pools.

- Wave pools are large (20,000 to 30,000sf gross floor area for entire building) and if they are built much smaller, they lose their attractiveness as a destination – there is a need for sufficient deck space (lounge chairs), kiddie spray options, family change rooms, and birthday party rooms. A facility of this size would impact the site, including the parking lot, traffic flow, and may result in the removal of some amenities.

If the City is interested in pursuing the provision of a wave pool, it is recommended that a site in close proximity (or attached) to hotels and other attractions be considered. As a facility of this significance would require substantial daily admissions in order to mitigate costs, it is further recommended that such facility be located at an accessible site within a larger urban centre (e.g., Sudbury) capable of attracting the largest market possible. Lastly, any investment of this magnitude should be guided by a market study to determine the usage, tourism, and partnership potential for a wave pool and associated uses, which is beyond the scope of this Feasibility Study.

3.3 Aquatic Needs Assessment

In order to evaluate aquatic facility needs, it is necessary to have an understanding of current municipal pool utilization in the City, the types of programs and services that are currently offered, a long-term projection of needs, and other market considerations.

Usage of Existing Pools

The City's 5 municipal indoor pools offer recreational swimming opportunities through adult lane swims, public swims, family swims, and waterfit classes through drop-in passes. The rectangular tanks provided in the City's five indoor pools primarily provide space for lane swimming and lessons/programs, but limited use for leisure swimming or therapeutic activities, including use by seniors or the disabled.

In 2012, the City's indoor pools accommodated 176,694 swim visits and there was very little change over figures from 2010. The following tables illustrate pool usage for the years 2010, 2011, and 2012.

Swim Visits by Facility, 2010-12

Facility	2010	2011	2012	Change (2010-12)	
Gatchell	41,827	39,685	35,549	-6,278	-15.0%
Onaping	8,854	7,512	7,412	-1,442	-16.3%
R.G.Dow	31,893	34,385	31,616	-277	-0.9%
Howard Armstrong Recreation Centre	60,570	60,227	60,278	-292	-0.5%
Nickel District	33,776	37,986	41,839	8,063	23.9%
Total Visits	176,920	179,795	176,694	-226	-0.1%

Source: City of Greater Sudbury, 2013

Swim Visits by Type, 2010-12

Type	2010	2011	2012	Change (2010-12)	
Lessons	60,350	67,206	66,652	6,302	10.4%
Aquafit / Aquacices	23,273	23,021	23,470	197	0.8%
Recreational Swims / Swim Visits	66,861	66,316	63,359	-3,502	-5.2%
Rentals	26,436	23,252	23,213	-3,223	-12.2%
TOTAL	176,920	179,795	176,694	-226	-0.1%

Source: City of Greater Sudbury, 2013

The Howard Armstrong and Nickel District pools are the most well used, although as discussed later, considerable capacity to expand programming exists at these and all sites. Comparatively, the Onaping pool has extremely low usage levels, but is a much smaller tank. City-wide swimming lesson registration, which is a good indicator of swimming demand, increased by 8% between 2003 and 2012, but declined slightly from 2011 to 2012.

Calculating the utilization of indoor pools can be done through the use of a capacity formula that measures the water surface area (with a factor applied for varying depths) that is then applied against usage data. A full analysis using this approach (or an assessment of pool schedules) is beyond the scope of this Study, but this methodology does allow for some high level comparisons between Greater Sudbury pools and those in other communities. Typically, most pools have a maximum theoretical capacity of 125,000 to 200,000 swims per year depending on their design; smaller pools may have a lower capacity due to reduced access, while multi-tank aquatic centres may have a higher capacity. However, this figure requires some additional interpretation as community pools like those in Greater Sudbury rarely achieve utilization levels above 50% due to the programming mix and lower use during non-prime times. As such, 50% of the maximum design capacity is generally considered to be at the upper end of the comfortable capacity.

Between 2010 and 2012, Greater Sudbury's five municipal indoor pools have averaged about 35,500 annual swims each; if the lower performing (but smaller) Onaping Pool is removed from this calculation, the City's pools are average 42,500 annual swims each. This data suggests that **the City's pools are operating at about 60% of their theoretical capacity** (which represents 30% of their maximum design capacity); an examination of attendance in relation to pool programming may add additional context to this figure. Based on this high level assessment, there would appear to be available capacity for additional usage within the City's current pool supply. Most City pools are currently operating at between 40 to 80% of their theoretical capacities, with the Nickel District and Howard Armstrong pools operating closer to the upper end of this range.

Another indicator of demand is the number of swims per capita in municipal pool. Greater Sudbury averages about 1.1 swims per capita at its indoor pools, which is at the very low end of the typical range, but not surprising given the City's urban/rural blend and large geographic size.

City-wide Aquatic Facility Needs

The City's 2004 Parks, Open Space & Leisure Master Plan identifies a service level of 1 indoor aquatic centre (including post-secondary and not-for-profit pools) per 25,000 residents; note: this Master Plan is currently under review. This provision target is applied in the following table, which illustrates that there is currently a small surplus of facilities and no long-term need to provide an additional aquatic facility within Greater Sudbury. The primary market for a pool in Rayside-Balfour is approximately 12,000, less than half of what would normally be required to support an indoor aquatic facility.

Projection of City-wide Aquatic Facility Needs

	2011	2021	2031	2036
Projected Population	166,330	171,750	175,840	176,800
Provision Standard	1 indoor aquatic centre per 25,000 population			
Indoor Aquatic Centres Required	6.7	6.9	7.0	7.1
Existing Supply (City, YMCA, University)	7			
Surplus (Deficit)	0.3	0.1	0.0	(0.1)

Population Forecast (Reference Scenario): City of Greater Sudbury. Growth Outlook to 2036. Draft, May 2013.

Given that the City's pools are operating under capacity, the issue is not one of whether or not there are enough indoor pools, but rather whether they are providing the desired level of service and are designed properly. Specifically, all of the City's pools are rectangular lane pools with deep water – the City has enough fitness and competition pools for its current and long-term needs. However, other than the YMCA facility, there are no leisure pools, which as mentioned earlier are characterized by shallower water, irregular shapes, and waterplay elements such as slides and sprayers.

The City's 2004 Parks, Open Space & Leisure Master Plan recommended that, should a new pool be considered in the future, it should be located at a multi-use recreation complex for maximum exposure and better cost recovery and should include leisure pool design features. **Past studies have suggested that if the City is going to commit to building a new leisure pool, there should be a willingness to undertake considerable marketing (to a regional audience) and to consider the closure of an aging, under-performing aquatic facility.**

It also bears noting that indoor aquatic centres are highly expensive and require significant outlays for capital and operational expenses. In fact, municipal indoor aquatic centres are virtually assured of running an operational deficit from year to year, even in the largest of markets (the City's pools recovered approximately 34% of their total costs in 2012). **As such, the decision to construct indoor aquatic facilities in municipalities is generally made based on intrinsic value (i.e., community benefit) and the belief that everyone should be afforded the opportunity to learn to swim, regardless of the likely financial losses.**

Market Considerations

The success of a pool is driven largely by its proximity to its market, design, and co-location with other municipal and recreational facilities (e.g., libraries, arenas, gymnasiums, etc.). The proposed location at the Lionel E. Lalonde Centre has the benefit of being an existing community destination, with amenities such as a fitness centre and gymnasium, among other services.

Children and youth are the primary users of swimming pools. This age cohort generally participates in instructional programs (which generate the highest revenues for municipal pools) and generally surpasses adult participation rates for recreation swims. Industry studies frequently indicate that youth engage in swimming activities three to five times more often per year than adults. Locally, it is estimated that the children and youth age cohort (0 to 14 years) represents approximately 16% of Rayside-Balfour's population. By 2036, the proportion of this population will decline slightly to account for 15% of area residents. A similar pattern is projected for the City as a whole.

Population and participation trends suggest that there will be **no appreciable growth in recreational swimming, children's swim lessons and related activities by 2036 in the Rayside-Balfour area** as the population is forecasted to exhibit only modest growth over this time period. Aging trends suggest that a large percentage the area's population will be 55 years of age or older (34% of the population by 2036), most of whom will not swim as frequently as younger populations, but may be interested in alternative pool activities such as aquatic exercises.

Looking at the entire population, the City's participation statistics reveal that approximately 176,694 visits were made to indoor pools in 2012. This level of participation is equivalent to approximately 1.1 recreational swim occasions per population. If the swim occasion per population ratio were to remain constant into the future, the City could expect that recreational swimming would change in proportion to population growth. Based on current population forecasts, this translates into a growth in swim visits of only 6% across the entire City by 2036 (and 10%

in Rayside-Balfour). These figures will be used later in this report to help forecast potential usage and the revenues associated with such usage.

The following table illustrates the population data associated with the primary market (Rayside-Balfour) and potential secondary market (balance of the City of Greater Sudbury). The small size of the primary market suggests that local demand for an aquatic facility is modest and an aquatic facility of any design would require usage from the secondary market in order to sustain a viable operation. Again, the design of the facility and its ability to offer a unique level of service to the City will also impact its viability.

Population Forecasts for Primary and Secondary Markets

Community	2011	2021	2031	2036	Growth (2011-2036)	
Local Market – Rayside-Balfour						
Total Population	11,860	12,470	12,910	13,010	1,150	9.7%
Ages 0 to 14	1,880	1,770	1,900	1,890	10	0.5%
Ages 55+	3,260	4,270	4,490	4,450	1,190	36.5%
Secondary Market – City of Greater Sudbury (excluding Rayside-Balfour)						
Total Population	154,470	159,280	162,930	163,790	9,320	6.0%
Ages 0 to 14	23,540	23,060	24,130	23,510	-30	-0.1%
Ages 55+	44,930	54,750	56,340	56,200	11,270	25.1%

Source: City of Greater Sudbury. Growth Outlook to 2036. Draft, May 2013. Hemson Consulting Ltd.

If a new municipal indoor pool was developed, depending on its location, design, and level of amenity, it is likely that it would attract both new users and existing patrons, drawing some away from existing municipal operations and further marginalizing their usage. The split between new and existing users is difficult to predict in the absence of project-specific market research.

Currently, residents of Azilda are required to travel anywhere between 14 to 21 kilometres to access the City's larger municipal pools (the distance to Onaping is longer, at 30 kilometres). Depending on road conditions, these trips can be made by vehicle in as little as 15 to 20 minutes, which is **within the acceptable range** identified in many other communities where the consultant has undertaken this research. These locations would, however, be less convenient for those relying on public transit or alternative transportation modes.

Conversely, many residents within the former City of Sudbury can travel to Azilda in approximately 20 minutes, with much of this trip on a four-lane highway. Normally a 20-minute travel threshold would be used to define a primary market for a facility of this type; however, the existence of other pools (municipal, YMCA, and hospital) will reduce the draw to the Centre.

3.4 Defining the Market for Aquatic Therapy and Exercise

Reliable data regarding the number of people likely to participate in aquatic therapy activities does not exist; however, there are some general indicators that provide insight into this market. The 2013 Sports, Fitness and Leisure Activities Topline Participation Report prepared by The Sports and Fitness Industry Association indicates that 9.2 million Americans participated in “aquatic exercise” (such as aqua aerobics, water walking, etc.) at least once in 2012 (representing 3.2% of the population ages 6 and over), with 3.4 million Americans participating on a

regular basis (representing 1.2% of the population ages 6 and over). This compares to 23.2 million Americans that participated in fitness swimming at least once in 2012 (representing 8.0% of the population ages 6 and over), with 8.1 million Americans participating on a regular basis (representing 2.8% of the population ages 6 and over). In Canada, the “Sport Participation in Canada” research paper published by Statistics Canada in 2005 found that 2.9% of Canadians age 15 and older participated in swimming.

The aforementioned American participation data provides additional information that helps to better understand the market. *“Aquatic exercise and swimming appeals most to females, particularly those in their middle or senior years...The average age of the quintessential aquatic exerciser is almost 47 years old...When casual aquatic exercise participants are removed from the sample, the average age of the “frequent participant” (those who reported exercising in water over 100 days/year) ascends to 57+ years. Nearly 75% of aquatic exercisers are female.”*⁸

A recent study of aquatic physiotherapist patients in the United Kingdom⁹ found that 70% of patients were aged 40 years and above and 62% were female. Furthermore, the median number of weeks participating in aquatic physiotherapy treatment was 6 weeks, as was the number of treatments (e.g., one per week). Range of movement and strengthening exercises were the main type of aquatic physiotherapy intervention reported with approximately half of all patients receiving some educational printed material, specific to aquatic physiotherapy. Only 10% were given specialist aquatic therapy interventions. Other forms of research suggest that the use of aquatic physiotherapy is on the rise; however, detailed trend rates are unavailable.

These findings suggest that aquatic exercise (and swimming) is most popular amongst women, particularly those entering their older adult years (e.g., 55+). Generally speaking, the older a person, the less likely he/she is to swim; however, the inverse is true for aquatic exercise as an increased number of older adults means growing demand for aquatic exercise programs, particularly in the daytime. **It has been observed that various forms of aquatic exercise appeal to approximately 3% of the population, although this can vary depending on a wide range of factors.** In terms of those seeking physiotherapy treatment, the predominant forms of intervention focused on range of movement and strengthening exercises which, if properly designed, can be delivered in a group setting with the guidance of a qualified instructor (following proper treatment from a professional practitioner). **The proposed facility at the Lionel E. Lalonde Centre would deal largely with aquatic exercise activities (which require guidance from a certified instructor, but not a physical therapist) and transitioning clients from therapy to fitness; however, the pool would be made available for rent to certified therapists for the purposes of aquatic physical therapy.**

It bears noting that these assumptions are based on broad trends and data from other jurisdictions. Local polling of community input and interest in aquatic activities has not been undertaken as part of this Study for the City of Greater Sudbury, nor has interest been sought from the local health and wellness community. **Prior to full implementation of this Study, it is recommended that the City undertake targeted consultation with the community and potential stakeholders to more fully define the parameters of the project as well as possible partnership opportunities.**

⁸<http://www.aquatictherapist.com/index/2009/04/aquatic-exercise-statistics-how-popular-is-nonswimming-aquatic-exercise.html>. Accessed January 2014.

⁹ HyDAT Team (2009). The HyDAT Project: UK Aquatic Physiotherapy Data Collection. London: Chartered Society of Physiotherapy.

3.5 Defining the Options for the Proposed Aquatic Facility

There is ample capacity within the City's competition and fitness (rectangular) pools, but leisure and therapeutic pools are not currently offered by the City of Greater Sudbury. New aquatic opportunities geared toward a small to medium-sized market should form the primary use of any new aquatic facility built in Greater Sudbury. The two options being explored in this Feasibility Study – that being a stand-alone therapy pool and a combined therapy pool/leisure pool – are consistent with this direction. **However, the development of a Therapeutic/Leisure Pool (the larger of the two options) should, at a minimum, trigger a review of other municipal pools, with the closure of an aging and/or under-performing pool being one possible outcome.**

To inform the facility concepts and business plan, the two facility options are discussed below. As mentioned earlier, any new aquatic facility should also have warmer temperatures, shallower depths, and integration of barrier-free components at a minimum, with a view towards serving an increasingly aging population.

Option A: Therapeutic Pool – Stand-alone

The appeal of a stand-alone therapy pool is predominantly for rehabilitation or therapeutic purposes (e.g., people with disabilities or injuries), but they can also be designed for toddlers and seniors. Individuals using therapeutic pools are able to use the hydrostatic pressure of the water as an exercise medium, while the depth allows users to become buoyant, lessening impact on the body. Given the unique nature of this facility in the City, it is likely to draw patrons from outside the primary market area.

A true therapeutic pool consists of a small tank (generally 400 to 800 square feet of wet space) and very warm water (33 to 35 degrees Celsius); these are traditionally found in the health care sector as they are used for specialized purposes and seldom offer public access. Therapeutic pools may have a shallow depth throughout (ideally 1 to 1.5m; most therapy activities require a depth around 1.2m) or be gently sloping, contain jets/bubblers and seating, and can accommodate 10 to 30 persons at a time. A wide teaching stair entry ensures easy accessibility for all people – but especially those most in need of a therapeutic pool; a self-directed chair lift, hand railings, and benches with hydrotherapy jets in appropriate locations are also recommended.

To respond to the growing needs of seniors and persons with disabilities in particular, some municipalities are beginning to offer facilities and programming focussed on hydro-therapy. Municipal therapeutic pools would not be for specialized water therapy or activities requiring medical supervision (as is the case for the facility at the local hospital), but rather for self-administered therapy and community use, particularly older adults. The focus of a municipal therapy pool should be on post-recovery rehabilitation programs and swim lessons for younger children.

Although they are more common in the health sector, stand-alone therapeutic pools (without other aquatic tanks) are rare in a municipal setting as these tend to accommodate a narrow range of aquatic uses. Often therapeutic pools are supported by another tank for learn-to-swim lessons and lane swimming (with cooler water), as well as full support facilities (e.g., change rooms), and often other recreational spaces (e.g., fitness centre, gymnasium, etc.). It may be possible to provide a stand-alone therapeutic pool without a main pool in place; however, experience in other communities indicates that many therapy pool participants use them in conjunction with activity in a primary pool. In cases where a primary tank is not provided, municipalities are offering therapeutic features as part of multi-use leisure pools (see Option B). Either pool option would offer potential synergies with the existing fitness centre and gymnasium at the Lionel E. Lalonde Centre.

The following are some images of stand-alone and/or smaller therapeutic pool tanks in use in other communities:

Welland Community Wellness Complex (City of Welland)
Therapy Pool (adjacent to smaller hot tub)



Sir Allan MacNab Recreation Centre (City of Hamilton)
Therapy Pool (near 25M tank)



West End Recreation Centre (City of Guelph)
Therapy Pool in forefront



Ruddy Family Y (Orleans Ontario)
Therapy Pool with 25M Pool



Option B: Therapeutic / Leisure Pool

A combined therapy/leisure pool would provide the same benefits of a stand-alone therapeutic pool, but would also have the advantage of accommodating a wider range of opportunities, specifically for younger children to participate in swimming lessons and leisure swimming. The leisure pool components would offer a “fun factor” that is not currently available in the City’s municipal indoor pools. Toys, play features, and similar amenities will broaden the appeal of the pool and attract users of all ages; the degree to which these are included in the pool can be determined at the design stage. Given the unique nature of this facility in the City, it too could draw patrons from outside the primary market area, although this is dependent upon factors such as size, supporting amenities, scheduling, pricing, etc.

A multi-use therapy/leisure pool is larger than a therapeutic pool (e.g., 1,200 to 2,400 square feet of wet space) as it accommodates more than one activity, although not necessarily at the same time. Because multi-use therapy/leisure pools have a wider range of uses, the water is not as warm as a true therapeutic pool (closer to 30 to 33 degrees Celsius), but warmer than a competitive or fitness pool. The pool tank may be rectangular or free-form, contain waterplay features such as sprayers or bucket dumps, and entry may be made possible through wide teaching stairs. Should sufficient room allow, the tank may include a deeper area (up to 1.8m). The pool schedule

would dictate whether the facility is being used for therapeutic or recreational activities to mitigate potential conflicts.

Therapy/leisure pools are increasingly common in the municipal sector, although they are typically provided in support of a competition pool and rarely as a stand-alone amenity. The following are some images of multi-use leisure and/or larger therapeutic pool tanks in use in other communities:

Mississauga Valley Community Centre (City of Mississauga)
Therapy Pool



Peterborough Sport & Wellness Centre
Therapy Pool in multi-tank complex



Clarkson Community Centre (City of Mississauga)
Therapy Pool and 25m Fitness Pool



Milton Sports Centre (Town of Milton)
Multi-use Pool and 25m competition pool



Quinte Sports & Wellness Centre (City of Belleville)
Therapy Pool, 25m competition pool, and kiddie pool



Schwartz-Reisman Community Centre (Vaughan)
Therapy Pool and 25m competition pool



4. Proposed Facility Concept

This section examines the characteristics of the existing facility and site, and identifies options for the proposed facility concept, including design considerations.

4.1 Site Context

The Lionel E. Lalonde Centre (herein referred to as the “Centre”) is located at 239 Montee Principale in Azilda. Originally constructed in 1970 as the site of the former Rayside-Balfour College, the building was also formerly known as the Trillium Centre prior to being purchased by the City in 2007. The Centre is a two-storey multi-purpose facility that is now owned by the City of Greater Sudbury and serves three distinct emergency and protective service functions for the City (Fire, EMS, and Police), as well as leisure services functions. The facility features a gymnasium, fitness centre (workout centre), meeting rooms, police training facility, collision reporting centre, and a range of other supporting amenities, such as change rooms, kitchen, cafeteria, offices, and dormitory. Total gross floor area of the Centre is approximately 136,256 square feet.

Lionel E. Lalonde Centre – Main Entrance



Lionel E. Lalonde Centre – Gymnasium



In November 2012, a Building Condition Assessment of the Centre was completed by Construction Control Inc. Over the last ten years, significant expenditures have been recorded at the Centre, including HVAC replacements, roof replacements, and the addition of EMS and Fire bays. This assessment found that, *“based on service life, inherent construction detailing and/or general upkeep, most of the components remain in a good state of repair.”* Moderate capital outlay is required to ensure the viability of this facility, with probable costs estimated to be \$2,024,000 over the next five years (largely for HVAC replacements) and an additional \$1,294,000 between six and ten years time (largely for the replacement of finishes).

In terms of accessibility, the Building Condition Assessment noted that the building has provisions for barrier free use (e.g., parking stalls, level entrances, counters, washrooms), with the majority being compliant and some being in need of refurbishment. There is presently no lift for access to the second floor.

Azilda is predominantly made up of low-density residential dwellings. The Centre is located along the westerly perimeter of the community and is adjacent to a mix of land uses, including outdoor recreation facilities to the

north (and a cluster of residential dwellings further north), a woodlot is to the east and southeast, a fire training facility to the south, and agricultural uses to the west. The Centre is located less than 2 kilometres from the Dr. Edgar Leclair Community Centre, which contains an arena, banquet hall, three ball diamonds, a playground, a skateboard park and multi-use court.

This project has the potential to strengthen the role of the Lionel E. Lalonde Centre as a community hub, a central meeting place or focal point where people of a variety of ages, abilities, socio-economic status and backgrounds can play, gather, and learn.

4.2 Facility Design Considerations

The opportunity to add a therapeutic pool to the Lionel E. Lalonde Centre has been discussed frequently over the years and, as a result, the potential addition has been taken into consideration for the master planning of the entire site. The purchase of additional land is not required to achieve this objective.

The proposed addition would be located on the North side of the existing facility, adjacent to the double gymnasium and fitness centre. This location allows for minimal site and parking reconfiguration and is situated closely to the other recreational and fitness areas in the building.

The size of the expansion in Option A is approximately 5,000 square feet, while the larger Option B would be approximately 7,400 square feet.

Proposed location of the Aquatic Facility Expansion



The addition will include a separate public entrance and office and administration area dedicated to the Therapeutic Pool and Active Living Studio. Along with the fully equipped men's and women's change rooms, a staff and family change room have been included in the Option B proposal. Both options include a sufficiently size pool deck area for on deck therapy and exercising.

As the pool is to be integrated with the current Centre, it is important that there be a cohesive vision for the entire complex, one that reflects the multi-use aspect of the facility and that derives economies of scale. Ideally, the design of the Centre would have one main entrance and reception area and a staffing structure that is representative of the multi-use nature of the Centre.

A shared administration/reception area for the pool, fitness centre and gymnasium – a single point of controlled access – would assist in achieving economies in operation and high quality customer service. For example, directing patrons through the workout space to access the pool would create access and safety concerns and is not recommended. However, the configuration of the existing Centre and fitness operation do not allow for single

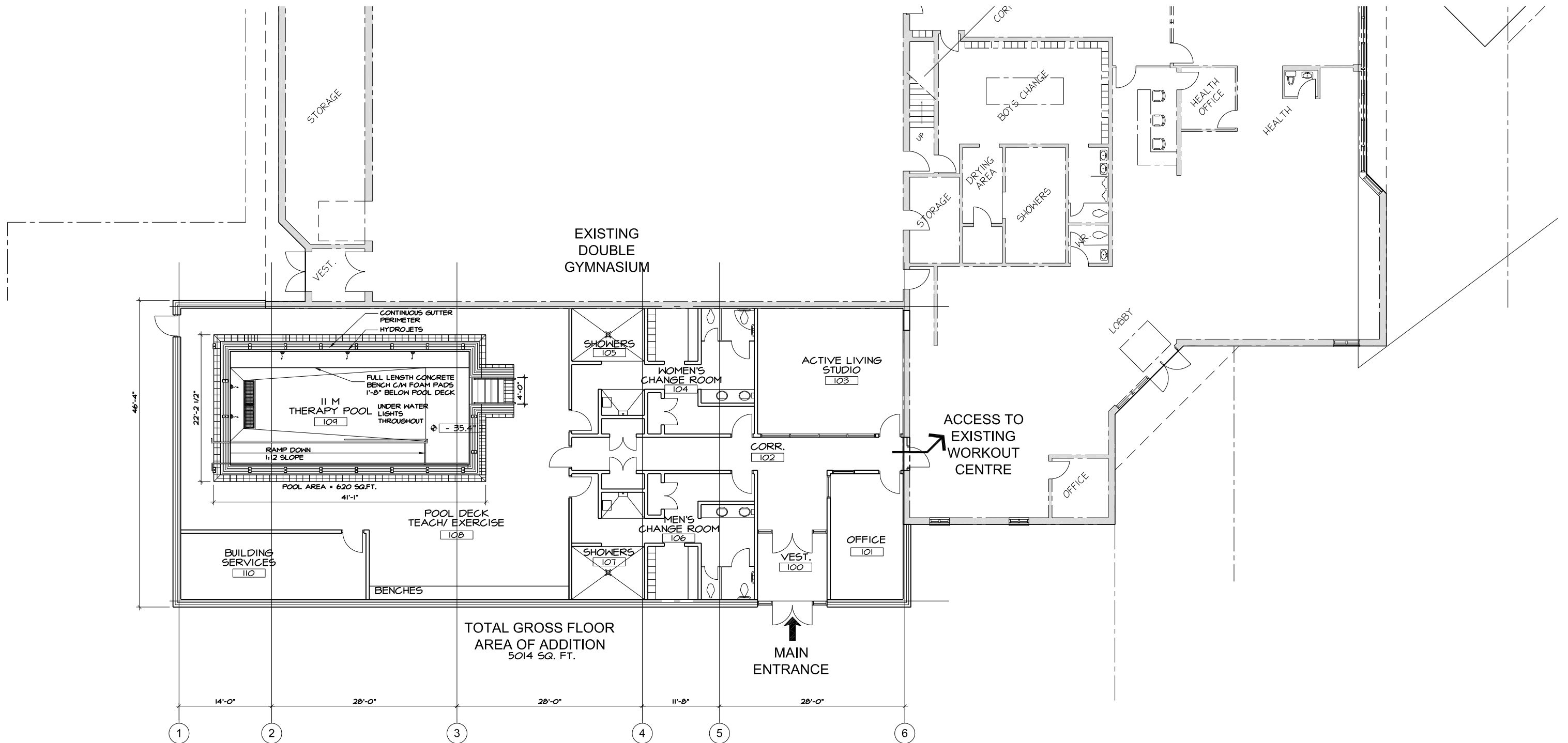
point of controlled access without an additional expansion or major internal renovation. To achieve these efficiencies additional facility reconfiguration options may need to be explored at the functional design stage.

The facility expansion should also provide space (e.g., a small active living studio) for dryland activities associated with the aqua therapy programming. Consideration may also be given to leasing existing space within the Centre (or adding on) to offer leasing opportunities for a physiotherapy clinic, which would derive benefits from the co-location of the pool (and offer a reliable stream of revenue). An allowance for leased has not been incorporated into the proposed design concepts, but could be considered at a future project stage following consultation with interested partners.

The existing change room/washrooms serve both the gym and fitness centre. It is recommended that separate men's, women's, family, and accessible change rooms be provided, each containing lockers and washrooms. New change room facilities should be more discreet, secure, flexible and accessible to a variety of users. All change rooms should be completely accessible. Clean and sufficiently-sized change rooms, comfortable seating areas, and friendly staff encourage people to linger for socializing and relaxing.

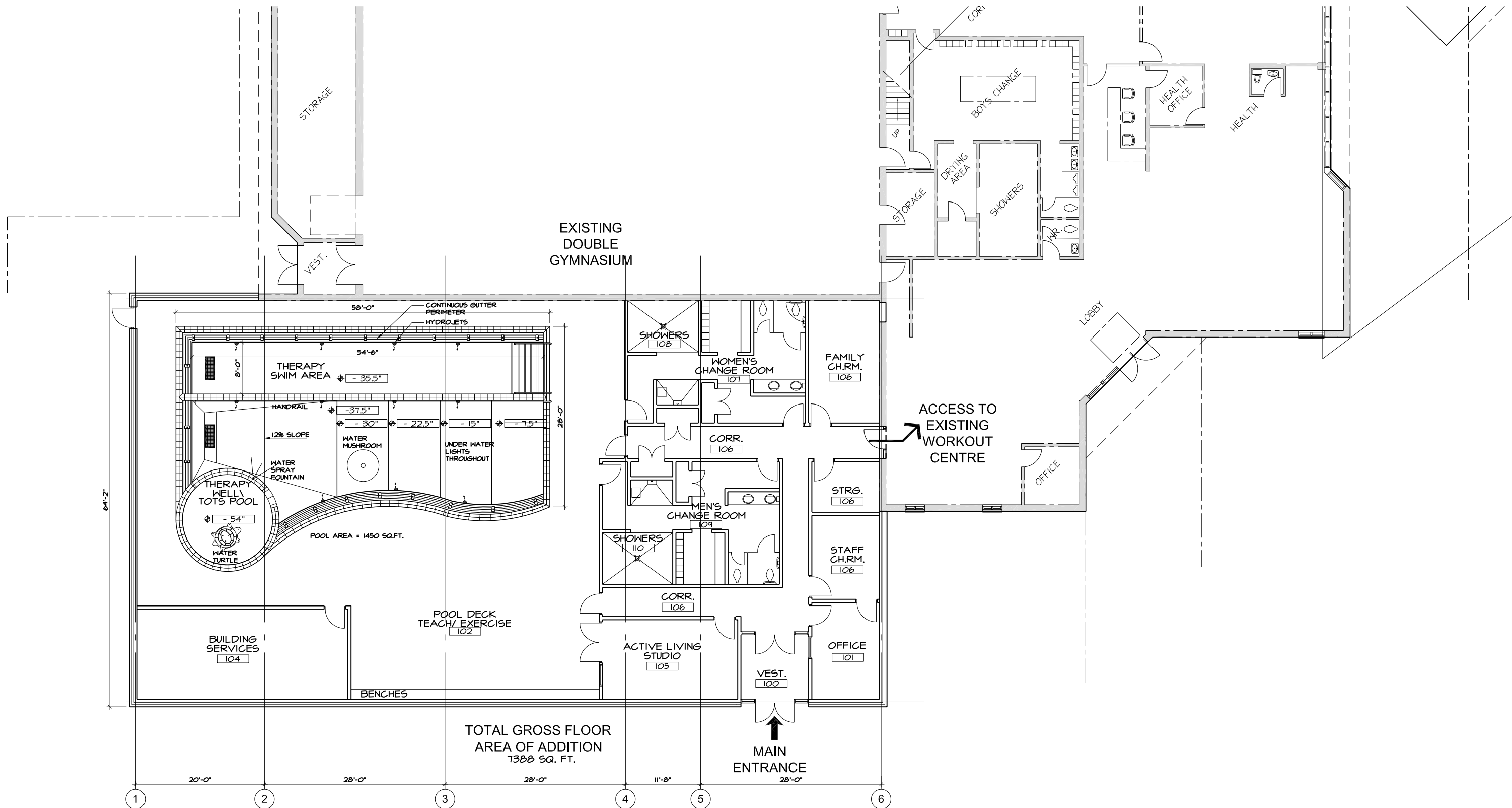
4.3 Facility Concepts

A preliminary space programme and conceptual designs have been prepared for both Options A and B and are shown on the following pages.



OPTION A: THERAPEUTIC POOL - STAND ALONE
City of Greater Sudbury
Therapeutic Pool - Feasibility Study
Ground Floor Plan

1" = 15'-0"
January 7, 2014
13130



OPTION B: THERAPEUTIC / LEISURE POOL FACILITY
 City of Greater Sudbury
 Therapeutic Pool - Feasibility Study
 Ground Floor Plan

1" = 15'-0"
 January 7, 2014
 13130

5. Business Plan

This section contains the capital construction cost and annual operating cost estimates for the proposed facility concepts, with consideration given to programming and staffing models and usage/demand analyses.

5.1 Capital Cost Estimates

This capital cost analysis is intended to provide a realistic assessment of the costs associated with the proposed project. Accordingly, this analysis should only be considered in conjunction with the drawings and other documents associated with this project.

All costs are estimated on the basis of competitive bids being received from general contractors and all major subcontractors and suppliers based on a stipulated sum form of contract. Pricing shown reflects probable costs obtainable in the project area on the effective date of this report and is therefore a determination of fair market value for the construction of the work and not a prediction of low bid. Cost escalation during the construction period is included in the unit rates used in this estimate and to a projected construction start date of Spring 2015.

A design and pricing contingency has been included to cover design development and pricing unknowns at this preliminary stage of the project. A construction contingency allowance has been adjusted to cover tendering and construction unknowns after the drawings are complete and a contract is awarded. Contingencies do not cover scope changes. This budget is based on a very preliminary concept only and should be considered as a Class D budget (+/- 20%).

We have assumed extending services from the existing building to service this addition and that these services are reasonably accessible.

Capital Cost Estimates

	Option A: Therapeutic Pool – Stand-alone	Option B: Therapeutic / Leisure Pool
Gross Floor Area	5,014 sf	7,388 sf
Pool Interior Area	620 sf	1,450 sf
Shell	\$836,400	\$1,151,400
Interiors	\$679,600	\$886,200
Services	\$385,600	\$498,500
Site & Ancillary Work	\$82,000	\$92,200
Net Construction Costs	\$1,983,600	\$2,444,700
Municipal & General Requirements	\$332,672	\$440,790
Total Hard Construction Costs	\$2,316,300	\$3,069,100
Contingencies & Consulting Fees	\$793,210	\$1,051,000
Total Recommended Budget (no HST)	\$3,110,000	\$4,120,000
HST	\$404,300	\$535,600
Total Recommended Budget (with HST)	\$3,514,000	\$4,656,000

Note: totals may not add due to rounding

The cost estimates exclude capital financing, cost escalation beyond April 2015, geotechnical investigation, project management, development charges (if applicable), LEED certification, etc. Detailed budget cost analysis sheets with a complete list of exclusions are contained in [Appendix B](#).

Based on the above information:

- **The total recommended budget for Option A (therapeutic pool – stand-alone) is approximately \$3.5 million, including HST.**
- **The total recommended budget for Option B (therapeutic / leisure pool) is approximately \$4.7 million, including HST.**

5.2 Operating Cost Estimates

It is assumed that the indoor pool would be operated by the City. As such, it is important to understand the operating position of the City's various pools as it relates to both demand (e.g., programs, drop-in, lessons, rentals, etc.) and supply (e.g., staffing costs, general operating costs, etc.). Other operating metrics and strategies of City pools were also assessed, such as staff deployment approaches, program and scheduling mixes, program registration levels, pricing, etc. It should be noted that the City's indoor pools all have unique operating profiles from what is being recommended (e.g., some are stand-alone, while others are components in larger community centres; many pools are of different dimensions; etc.). As such, these metrics were compared to data retrieved from other municipal therapeutic pools to estimate the financial projections for the expanded Centre.

The following observations are based on averages at the City's three stand-alone pools: Dow, Gatchell, and Nickel District (note: it was not possible to isolate pool-only costs at the HARC and Onaping facilities):

- In 2011 and 2012, the City's stand-alone pools each generated an average of \$202,000 in gross operating income, with aquatic lesson fees producing the majority (77%) of the facility's total revenue, followed by recreational swimming fees (13%), and pool rentals (10%).
- At 77% of the total facility expenditures, labour is by far the most significant expense item associated with the operating of the City's stand-alone pools. Utilities account for an average of 14% of expenses, while general operations and supplies (including maintenance, snow and ice control, supplies, office expenses, etc.) represent about 9% of total expenses.
- In 2011 and 2012, the cost recovery ratio for the City's stand-alone pools ranged between 38% and 44%. On average, the pools generate approximately \$1 for every \$2.40 spent to operate them.

Where noted, the current operating performance of the City's indoor pools has been used as the basis for estimating revenue and costs associated with the proposed therapeutic pool. In other cases, information gathered from therapeutic pool operations in other municipalities has been relied upon in order to bring the assumptions in line with industry standards. It bears noting that the public's willingness to use a pool at this location has not been tested.

A series of assumptions have been employed to project the financial performance of the proposed pool:

General Parameters

- Option A includes a stand-alone therapeutic pool that would be utilized predominantly for rehabilitation or therapeutic purposes (e.g., people with disabilities or injuries), as well as aquatic activities for infants/toddlers (such as swim lessons) and seniors. For Option A, the aquatic facility would be approximately 5,000 square feet, including pool tank, deck space, change rooms, studio, control desk, storage, and mechanical.
- Option B includes a slightly larger therapeutic / leisure pool that would accommodate similar activities to Option A (stand-alone therapeutic pool), but would also have the advantage of accommodating a wider range of opportunities, specifically for infants/toddlers and younger children to participate in swimming lessons and leisure swimming. For Option B, the aquatic facility would be approximately 7,400 square feet, including pool tank, deck space, change rooms, studio, control desk, storage, and mechanical.
- Both pools would be available for therapeutic programs, swimming lessons, and drop-in activities facilitated by the City, although the range of opportunities would be more limited under Option A; the pools are not designed to accommodate lap swimming or competitive use. While membership models could be contemplated for this facility (for access to therapeutic programs and/or access to dryland components such as the fitness centre), they are not included as part of this business plan.
- The primary market for the proposed pool is assumed to be approximately 11,860 residents in the Rayside-Balfour area. The secondary market includes the 154,470 residents living in the remainder of the City of Greater Sudbury.
- Pricing will not generally be based on cost recovery principles, but rather historic pricing levels within the City of Greater Sudbury.
- To arrive at the Year 5 estimates of financial performance, all costs have been accelerated by an average of 2% per year. Due to the growing population of older adults and the focus on therapeutic activities, all revenues have been increased by 3% per year during this timeframe.

Therapeutic Programs

- City-run therapeutic and group wellness programs should be oriented toward post-recovery rehabilitation activities that focus on improving flexibility, strength, and overall wellness (e.g., water aerobics, water walking, ai chi, chronic pain, arthritis, obesity, etc.). Specialized rehabilitation exercises are not a core service as these should be designed by a licensed therapist based on individualized treatment programs. It is likely that the pool will attract interest from physiotherapy clinics (this is addressed under rentals, although some practitioners may choose to access the pool during drop-in times).
- It is assumed that approximately 10% of the older adult population (ages 55+) in the primary market area would participate in therapeutic programs or related drop-in activities – this is in line with the 3% of the population that is estimated to participate in aquatic exercise – along with 2% of older adults in the secondary market, although some use will be made by persons with chronic health conditions and/or rehabilitative needs. The average participant is projected to attend 8 sessions per year. This represents an annual therapeutic visit attendance of 9,800 persons.
- Revenue associated with therapeutic program visits and drop-in visits are estimated based on an average of \$7.00 per visit, which represents a blended rate of the various fees charged by the City.

Recreational Swimming (Drop-in Activities)

- Recreational swim (drop-in activities, including therapeutic drop-in) revenue estimates are based on generating an average of \$3.50 per pool visit, which represents a blended rate of the various fees charged by the City.
- For Option A, annual recreational swim attendance would be the equivalent of 0.2 pool visits per population in the primary market area (half of the City average) and 0.01 pool visits per population in the secondary market area. This represents an annual recreational swim attendance of approximately 3,900 persons.
- For Option B, annual recreational swim attendance would be the equivalent of 0.4 pool visits per population in the primary market area (similar to the existing City average) and 0.02 pool visits per population in the secondary market area. This represents an annual recreational swim attendance of 7,850 persons.
- It should be noted that these are conservative estimates, with very few swims generated from the secondary market.

Lessons

- Lesson / parent and tot swim revenue is based on an average registrant fee of \$75 (8 sessions each), which represents a blended rate of the various fees charged by the City. On average, each registrant would register for 1.5 lessons per year. Lessons are directly proportional to the number of school-aged children, although some adult lessons may be offered for those that are uncomfortable with deeper water.
- For Option A, approximately 35% of the infant/toddler population (ages 0-4) in the primary market area (and 3.5% of infants/toddlers in the secondary market area) would register annually for swimming lessons / parent and tot swims, similar to existing usage levels. This pool would act as a draw due to its warmer water, but would be more limited due to its smaller size. This represents an annual lesson registration of approximately 480.
- For Option B, approximately 35% of the child population (ages 0-9) in the primary market area (and 3.5% of children in the secondary market area) would register annually for swimming lessons / parent and tot swims, similar to existing usage levels. This pool is larger than the one proposed in Option A and would be able to accommodate lessons to a slightly older age and would also act as a draw due to its warmer water. This represents an annual lesson registration of 950.

Rentals

- Rental options for the pool will also be made available for private functions (e.g., birthday parties, etc.), to established, independent, wellness professionals (physical therapists, fitness trainers, etc.) as a site for low impact therapy and training options, and to affiliated users such as schools and youth clubs.
- Public rental fees for the pool (e.g., for private wellness activities, birthday parties, etc.) are based on an average hourly charge of \$60, which is similar to the rental rate for the Onaping Pool. Affiliated rental fees for the pool (e.g., schools and swim clubs) are based on an average hourly charge of \$25, which is similar to existing rates. The intent of these fees is to recover the direct staffing costs attributable to the rental.

- For Option A, rental fees are based on an average of 3 public/private rentals (largely from physiotherapists) per week based on a 40 weeks per year.
- For Option B, rental fees are based on an average of 5 public/private rentals (largely from physiotherapists) and 1 affiliated rental per week based on a 40 weeks per year. The larger pool is anticipated to have more rental potential than the pool proposed in Option A.

Staffing

- As staffing costs account for the majority of pool operating expenses, an operating profile that limits this while still accommodating a variety of daytime, evening, and weekend programming is desired. This can be facilitated through a schedule that alters open and close times in keeping with program demand. The proposed schedule for this facility is based on approximately 55 operating hours per week in Option A and 70 operating hours per week in Option B.
- The pool would be the responsibility of a Facility Pool Operator who would work with a staff complement of part-time personnel. At a supervisory level, the facility would fall under the purview of an existing off-site Recreation Coordinator. A total of 5.0 FTE has been projected for Option A and 6.3 FTE for Option B, as follows:
 - The Facility Pool Operator (1.0 FTE) would oversee and assist with supervising the balance of the staff team, as well as be responsible for general operations, including aquatic program development.
 - The Assistant Pool Operator (0.6 FTE in Option A and 1.0 FTE in Option B) would provide coverage when the Facility Pool Operator is not working (e.g., evenings and weekends). Opportunities for job sharing with other municipal positions may be explored.
 - Although reception and maintenance staff are already in place at the Fitness Centre, additional support staff will be required for the pool. The current building configuration suggests that the pool would have its own control desk, which would be staffed by facility clerk receptionists (0.6 FTE in Option A and 1.0 FTE in Option B), with the Facility/Assistant Pool Operator providing additional coverage when possible. In addition, building attendants will be required to assist with general maintenance and janitorial duties (0.6 FTE in both options).
 - Other part-time labour costs are based upon the appropriate guard coverage during all hours of operation (1.3 FTE in Option A and 1.4 FTE in Option B) and the number of instructors that are necessary to conduct the lesson programs (1.0 FTE in Option A and 1.3 FTE in Option B).
 - Note: Lifeguard requirements are regulated by the *Ontario Health Protection and Promotion Act* and are a function of the size and depth of a pool (Class A). Both Options A and B as proposed within this study could require one to two lifeguards on duty at all times, depending on the number of bathers. The proposed pool operating schedule allows for one lifeguard and one swim instructor/lifeguard most of the time; two lifeguards are recommended during recreational swim times.
- Labour costs include a full-time staff benefit allowance of 30% and part-time staff benefit allowance of 15%, based on current City practices.
- It is important to note that all management, lifeguarding, and instructional staff will require first-hand experience in interacting and assisting in programs for people with chronic conditions of aging as they will

be expected to conduct exercise classes for individuals 55 years and older of varying ability levels. Furthermore, instructors must have specialized knowledge and experience relevant to aquatic therapy.

Operational Costs

- Utility costs are based upon \$7.50 per square foot, which is slightly greater than existing City pools to account for the warmer water and air requirements of the therapeutic pool. Based on the current operating approach for the Fitness Centre, it is possible that these costs may be remitted to the Lalonde Centre budget by way of an annual rent payment; for the purposes of this analysis, all costs are shown as accruing to the proposed aquatic component.
- Supplies, maintenance, and miscellaneous operating costs are based upon \$3.50 per square foot, which is similar to existing City pools.
- Direct operating costs and revenues associated with the proposed dryland component (e.g., active living studio, gymnasium) have not been projected as this space is anticipated to run at direct cost recovery levels through a blend of municipal programming and community rentals.

Also of note, a capital reserve fund is recommended to address future replacement costs. These funds can also be used annually to ensure that minor adjustments are made to the mechanical, electrical and plumbing systems – as well as the building envelope – to extend the life of the facility. The introduction of a capital reserve fund is not currently standard practice for the City of Greater Sudbury, but would generally be established at a rate of 1-2% of the building's replacement cost annually. If included, this would increase the net annual cost by approximately \$20,000 to \$50,000 per year, depending on the selected design/option and desired replacement cost ratio.

Lastly, changes to the fitness centre, gymnasium, or other operational aspects of the Lionel E. Lalonde Centre have not been assessed as these are outside of the project scope. Should the City continue to pursue the addition of an aquatic facility at this location, it is recommended that they assess potential impacts on the existing fitness centre and seek potential opportunities for operating and programmatic synergies. Impacts on the City's other indoor pools are also outside the scope of this project, although it is generally assumed that the proposed pool would redirect some lessons from existing pools (largely for residents in the primary market), while attracting new users to the proposed pool due to its unique offerings.

Based upon the preceding assumptions, the following table provides the first and fifth year financial projection for the two facility options.

Operating Cost Estimates

	Option A: Therapeutic Pool – Stand-alone		Option B: Therapeutic / Leisure Pool	
	<i>Year 1</i>	<i>Year 5</i>	<i>Year 1</i>	<i>Year 5</i>
<u>Revenue</u>				
Lessons / Parent & Tot	\$36,173	\$40,712	\$71,663	\$80,657
Recreational Swims	\$13,708	\$15,429	\$27,417	\$30,858
Therapeutic Programs	\$68,578	\$77,185	\$68,578	\$77,185
Pool Rentals	\$7,200	\$8,104	\$13,000	\$14,632
Total Revenue	\$125,659	\$141,430	\$180,657	\$203,331
<u>Expenses</u>				
Labour and Benefits	\$286,095	\$309,678	\$377,909	\$409,061
Utilities	\$37,500	\$40,591	\$55,500	\$60,075
Maintenance, Operations & Supplies	\$17,500	\$18,943	\$25,900	\$28,035
Total Expenses	\$341,095	\$369,212	\$459,309	\$497,171
Net Profit (Cost)	(\$215,436)	(\$227,782)	(\$278,652)	(\$293,840)

Based on the preceding assumptions:

- **Option A (therapeutic pool – stand-alone) would result in a net cost of approximately \$215,000 in the first year of operation, increasing to \$228,000 in the fifth year of operation.**
- **Option B (therapeutic / leisure pool) would result in a net cost of approximately \$279,000 in the first year of operation, increasing to \$294,000 in the fifth year of operation.**

6. Implementation

This section explores potential management, partnership opportunities, promotion/marketing priorities, and considerations for implementation.

6.1 Management & Partnership Options

Management Options

A facility incorporating the operating units contemplated in this study requires a degree of sophistication and specialized expertise to maximize financial and program performance. Municipalities usually elect to either self-manage multi-purpose complexes or contract the management and operations to a third-party, such as a not-for-profit organization or a private sector company. The financial projections included in the previous section assume the City would run the pool due to its complexity and the other on-site municipal business units. Consequently, estimates do not include management or franchise fees, bonuses or other costs normally associated with a contracted-out approach.

Furthermore, given the net deficit of the proposed facility component, it is unlikely that a private sector organization would be willing to invest equity in this project without a stronger return on its investment (i.e., from net proceeds or subsidy from the City). The operations of the proposed expansion, as they have been structured in this report, are not likely to provide net proceeds. Therefore, for a private sector organization to be attracted to the operational aspects of this project, the City would have to offer an annual management fee or similar payment, which would further drive up the net deficit of this project. And, unless the contracted partner was capable of generating substantially more income than is projected in the preceding business plan or would be able to contain cost to a greater extent than a municipal operation, the City would be required to absorb all the operating liability and entirely support the operating deficit.

Partnership Options

Several municipalities have developed creative relationships with outside entities in order to expand the type or quality of services provided at public recreation facilities or to produce additional income to the project. Typically, these relationships revolve around facilities or services that are synergistic to the “core business” of the facility. Examples may include:

- Not-for-profit-groups such as gymnastics or soccer clubs have partnered with municipalities to supplement arena or pool developments with complementary sport facilities that expand the use of the original project. Typically, the groups contribute some capital funds and/or commit to repaying the capital cost of the space that has been built for their specific purposes. Additionally, the groups agree to pay for common area maintenance and other recoverable charges.
- Contractors sometimes provide services that might otherwise have been provided by municipal staff. These types of relationships are often developed for food and beverage, concessions or retail services where the skill sets of qualified contractors can help to improve the financial performance of the operation.

- Most relevant to this proposal are possible relationships with privately funded health and wellness sector interests. Several recently developed public projects have created tenant spaces that have been leased to independent operators to augment the facilities or services that are provided by the municipality. Fitness clubs, physiotherapy clinics, high performance athlete training facilities, and specialized training centres have been incorporated into municipal and other public developments in many communities. For example, physiotherapy clinics have partnered with the following communities to lease space within aquatic centres (not an exhaustive list):
 - Kenora – Kenora Wellness Centre
 - Ottawa – St. Laurent Centre
 - Belleville – Quinte Sports and Wellness Centre
 - Peterborough (Trent University) – Trent Community Sport and Recreation Centre
 - Ajax – McLean Community Centre
 - Brantford – Wayne Gretzky Sports Centre
 - London – YMCAs (various)

There may be potential partners interested in becoming involved with this proposed project. Locally, the City of Greater Sudbury may consider establishing relationships with the following entities (but not limited to), should their mandates be in alignment with the proposed project:

- Health Sciences North
- Community Care Access Centre
- Physiotherapy clinics
- Laurentian University
- Cambrian College

Although there are numerous forms of partnership structures available to local governments, the most likely options for this project can be grouped in one of the following categories.

- Strategic Alliance – A relationship that involves two or more organizations collaborating on planning and delivering select services and programs. *Example: Hydrotherapy program design.*
- Contract Agreement – Services contracted to another partner organization, whereby the contracting partner may assist in the development of the service but has no responsibility for managing/operating the service other than ensuring the service is delivered to specification. *Example: Hydrotherapy program delivery.*
- Rental Agreement – Facilities rented by one partner from another, where the renter either allocates designated times to affiliated groups or directly delivers services and programs to its constituents in the rented facility. *Example: Physiotherapy tenant.*

While not a true form of partnership, sponsorships, naming rights, and creative marketing endeavours may also be considered.

To be successful, any partnership must be mutually beneficial with risks shared equitably between partners. Clear and attainable objectives should be set at the outset of the project, with performance measures established to consistently evaluate the success of the arrangement.

The scope of this study did not include detailed discussions with potential partners and it is difficult to predict all of the potential motivators that could attract partner interest. The City is advised to explore possible partnerships with outside organizations through the issuance of an Expression of Interest and to evaluate these interests utilizing a standard partnership framework. Previous direction regarding partnerships is provided by the City's Parks, Open Space & Leisure Master Plan.

6.2 Promotion & Marketing

Promotion of the pool should give proper consideration to the market it is intended to attract. Based on the design options under consideration, the primary markets are likely to be persons recovering from injury (post-recovery rehabilitation) or those dealing with chronic health conditions, including persons with disabilities. The warm water environment will also appeal to older adults, the elderly, and younger children. The leisure elements included in Option B may also be attractive to families with young children as they offer an experience that is not available in any other City facilities.

Based on the foregoing, marketing efforts should be targeted toward older adults and young families throughout the City. With the facility's location in Azilda, attracting users from outside the community (particularly the larger population base in the former City of Sudbury) is critical to its success. Regional awareness of this facility will be lower given its location, but its accessibility (20 minutes from many parts of the City, with access also from public transit) should also be a key message.

Key messages should focus on the benefits of aquatic therapy and its contribution toward health and wellness, as well as the proposed program mix (e.g., water aerobics, water walking, ai chi, chronic pain, arthritis, obesity, etc.). Programs that identify with specific conditions (e.g., arthritis, strokes, hip and knee replacement, back pain, etc.) resonate best with potential users.

The messaging should also reflect the multi-use nature of the complex (fitness centre, gymnasium) and the multi-use nature of the pool (should the City proceed with Option B), while indicating that this is not a lap swimming facility. Consideration may also be given to re-naming the Centre a "Wellness Centre", particularly if additional health and wellness services are offered.

Formal and/or informal connections with health providers should also be pursued as a way to promote the pool to those seeking health/wellness and rehabilitative activities (e.g., practitioners could provide brochures or "prescriptions for exercise"). The City's commitment to providing staff that are qualified in aquatic therapy principles and protocols will also generate buy-in from the health care community and there will be a greater willingness to refer patients to this facility for post-recovery exercise. Marketing should begin prior to the opening of the facility and may form part of a fundraising campaign.

6.3 Implementation Plan

In the current context, it is suggested that the City consider planning the delivery of the project through a conventional Design-Bid-Build (DBB) approach. Following this approach, the City would work with a Prime Consultant to develop a design (the consultant should ideally have expertise in therapeutic pools), issue a tender and receive bids to construct the pool, and then contract with a constructor to have the pool built. This approach gives the City the greatest control of what will be built and provides a product of market quality at a competitive price within a reasonable, standard schedule. While the DBB system does not guarantee a superior product, the environment to achieve this goal is maintained by the participation of the client and the client-retained consultant throughout all phases of the project.

The ordered tasks below are intended to guide the City in the development of the proposed building expansion using a Design-Bid-Build delivery methodology.

- 1) Functional program – the general recommendations of this feasibility study will be further elaborated to define the specific requirements for the facility; typically defined by an architect
- 2) Schematic design – includes floor plans and elevations and shows the character and materials to be used in the building
- 3) Allocation of funds – the project budget is assessed to make a determination of how, and when, to proceed; this is an appropriate stage to commence fundraising efforts should that form part of the funding strategy
- 4) Construction document preparation – includes design development and the preparation of tender documents, sufficient for preliminary site plan approval; on completion of the tender documents a pre-tender Class B estimate to within 10% of the contract cost can be developed
- 5) Tendering and award – tender documents are issued and interested general contractors (or pre-qualified bidders) develop submissions and pricing, which are formally evaluated by the City and its project manager; the lowest priced bid that meets the tender requirements is awarded the contract
- 6) Construction – the successful bidder will construct the project in accordance with the construction documents, with significant oversight from the City and its project manager
- 7) Commissioning – this process ensures that the City's requirements are incorporated into the design, are built, and are configured to produce the required result (often achieved with the assistance of a Commissioning Agent); move-in follows, which can require considerable advance coordination

The implementation process for this project is likely to take a minimum of two to three years given the need to receive final approval, to secure funding, to establish partnership parameters (if applicable), to complete the design and tender process, and to construct the facility. Even this may be aggressive as there are many factors that could delay this project even further (e.g., fundraising, partner requirements, etc.). The City may also wish to form a Building Committee to oversee the project.

Appendix A

Indoor Pools and Programming – Municipal Profiles

The following is a sampling of municipal pool and programming profiles from the following communities:

- Hamilton
- Kawartha Lakes
- Markham
- Mississauga
- Ottawa
- Vaughan

City of Hamilton		
Therapeutic Pools	• 5	
Size (Range)	• >96 sq ft	
Depth (Range)	• 3ft – 4ft	
Temperature	• 33° + C / 92° + F	
Capacity	• 20	
Accessible Features	• Change rooms and shower • Wheelchair/floor lift • Ramp entry • Chairlift • Washrooms	
Amenities	• Waterslide and spray features	
Partnerships	• None	
Programs	• Aquafit - \$41.40 – \$59.80 (9 – 13 classes)	
Other Facility Components	• 25m pool • Arena • Gymnasium • Multi-purpose rooms and kitchen • Spa • Youth room • Dance/fitness space • Community meeting space	

Note: Varies by facility

City of Kawartha Lakes		
Therapeutic Pools	• 1	
Size (Range)	• 891 sq ft	
Depth (Range)	• 2.5ft – 4.5ft	
Temperature	• 36° C / 96° F	
Capacity	• 43	
Accessible Features	• Ramp entry	
Amenities	• n/a	
Partnerships	• n/a	
Programs	<u>Older Adult</u> • Recreational Swim - \$3.96 (per pass), \$31.50 (10 pass), \$63 (3 month), \$100.80 (6 month), \$151.20 (annual pass) <u>Adult/Family</u> • Adult Swim – \$19.70 - \$39.39 (10 classes) • Recreational Swim - \$4.52 (per pass), \$35.70 (10 passes), \$84 (3 month), \$134.40 (6 month), \$210 (annual pass) • Recreational Swim (Family) - \$10.17 (per pass), \$77.90 (10 passes), \$525 (annual pass) <u>Child</u> • Recreational Swim - \$2.10 (per pass), \$17.90 (10 passes), \$52.50 (3 month), \$84 (6 month), \$126 (annual pass) <u>Preschool</u> • Preschool Program - \$63 (10 classes)	
Other Facility Components	• 25m pool	

City of Markham		
Therapeutic Pools	• 2	
Size (Range)	• n/a	
Depth (Range)	• n/a	
Temperature	• 34° + C / 93° + F	
Capacity	• n/a	
Accessible Features	• Ramp	
Amenities	• n/a	
Partnerships	• Therapeutic programs at the Cornell Community Centre & Library are held in partnership with the Markham-Stouffville Hospital.	
Programs	<u>Older Adult</u> • Aquafit - \$4.10 (each class) or \$37.02 (10 classes) • Specialty Aquafit - \$6.00 (per class) or \$53.39 (10 classes) • Recreational Swim - \$2.50 (per pass), \$22.37 (10 passes), \$261.56 (annual pass) <u>Adult/Family</u> • Recreational Swim - \$4.10 (per pass), \$36.92 (10 passes), \$436.58 (annual pass) • Recreational Swim - \$10.10 (per pass), \$90.51 (10 passes), \$1,062.79 (annual pass) <u>Youth</u> • Recreational Swim - \$2.40 (per pass), \$21.36 (10 passes), \$231.25 (annual pass) <u>Programs</u> • Aquafit - \$5.95 (per class) or \$55.39 (10 classes) • Specialty Aquafit - \$8.30 (per class) or \$74.65 (10 classes) • Parent & Tot - \$78.50 (9 classes) • Preschool - \$78.50 (9 classes) • Ladies Only - \$78.50 (9 classes)	
Other Facility Components	• 25m pool • Leisure pool • Arena • Fitness Centre • Indoor walking/running track • Community hall • Gymnasium • Squash courts • Multi-purpose rooms • Library • Senior/Youth room	

Note: Varies by facility

City of Mississauga		
Therapeutic Pools	• 4	
Size (Range)	• 600 sq ft – 1,300 sq ft	
Depth (Range)	• 3 ft – 6 ft	
Temperature	• 33° C / 92° F	
Capacity	• n/a	
Accessible Features	• Ramp entry • Pool lift and body sling support lift • Wide shallow teaching steps • Hydro bench	
Amenities	• Spray features	
Partnerships	• n/a	
Programs	<u>Adult (Aquatic Therapy, Aquatic Exercise, Drop-in)</u> • Therapeutic Time - \$10/Visit or \$9/5+ Visits • 45 Minute Class – \$11.30 / Drop-in, \$10.20 / 5+ Visits, or \$7.69 / Registered Class • 60 Minute Class - \$15 / Drop-in, \$13.50 / 5+ Visits, or \$10.25 / Registered Class • Personal Trainer - \$54 / 1-4 Hours or \$45 / 5+ Hours • Any Class - \$7.50 / Visit or \$5.40 / 5+ Classes • 1 Month Pass - \$54 • 3 Month Pass - \$47.67 / Month • 12 Month Pass - \$37 / Month	

City of Mississauga		
Programs	<u>Youth/Student, Older Adult, Person with a Disability (Aquatic Therapy, Aquatic Exercise, Drop-in)</u> • Therapeutic Time - \$8/Visit or \$7.20/5+ Visits • 45 Minute Class – \$9.10 / Drop-in, \$8.20 / 5+ Visits, or \$7.69 / Registered Class • 60 Minute Class - \$12 / Drop-in, \$10.50 / 5+ Visits, or \$10.25 / Registered Class • Personal Trainer - \$54 / 1-4 Hours or \$45 / 5+ Hours • Any Class - \$6 / Visit or \$4.60 / 5+ Classes • 1 Month Pass - \$54 • 3 Month Pass - \$31.13 / Month • 12 Month Pass - \$29.60 / Month	
Other Facility Components	• 25m pool • Arena • Library	• Gymnasium • Fitness centre • Sports fields

Note: Varies by facility

City of Ottawa		
Therapeutic Pools	• 3	
Size (Range)	• n/a	
Depth (Range)	• n/a	
Temperature	• 31°+ C / 88°+ F	
Capacity	• n/a	
Accessible Features	• Chairlift • Pool ramp	
Amenities	• n/a	
Partnerships	• n/a	
Programs	• n/a	
Other Facility Components	• 25m pool • Wave pool • Steam room • Training pool • Sauna • Arena	• Squash courts • Fitness studio • Meeting rooms • Hall • Sports fields

Note: Varies by facility

City of Vaughan		
Therapeutic Pools	• 1 (in addition to one hot tub)	
Size (Range)	• 144 sq ft	
Depth (Range)	• < 3 ft	
Temperature	• 33° + C / 92° + F	
Capacity	• n/a	
Accessible Features	• Ramp entry • Stairs • Chairlift	
Amenities	• None	
Partnerships	• None	
Programs	<u>Older Adult</u> • Aquafitness/Therapy Swim – \$4per class, \$31.50(10 passes), \$74.25 (25 passes), \$125.22 (Annual Pass) • Recreational Swim – \$3.25 (per pass), \$26.40 (10 passes), \$115.50 (25 passes), \$135.67 (annual pass) <u>Adult</u> • Recreational Swim – \$5 (per pass), \$39.80 (10 passes), \$175.50 (25 passes), \$256.33 (annual pass) • Aquafitness/Therapy Swim - \$9.25 (per class), \$71.40 (10 passes), \$166.25 (25 passes), \$354.71 (annual pass)	

City of Vaughan		
Programs	<u>Youth</u>	
	- Recreational Swim – \$2.25 (per pass), \$21.50 (10 passes), \$94.50 (25 passes), \$137.41 (annual pass) - Aquafitness/Therapy Swim - \$9.25 per class, \$71.40(10 passes), \$166.25 (25 passes), \$354.71 (Annual Pass)	
	<u>Programs</u>	
	- Parent & Tot Swim - \$80.75 (9 Classes) - Preschool - \$89 - \$119 (9 to 12 Classes) - Swim Lessons - \$108 - \$140 (12 Classes)	
	Special Needs - \$130 (12 Classes)	
Other Facility Components	25m pool - Leisure pool - Arena - Fitness Centre	- Gymnasium - Multi-purpose rooms - Sports fields

Note: Varies by facility

Appendix B

Capital Budget Cost Analysis Sheets



255, rue Larch Street
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A Partnership of Corporations:
Un partenariat d'entreprises:

Rick Yellowwega Inc. Architect
Louis Bélanger Inc. Architect
Michael Luciw Inc. Architect
Amber Salach Inc. Architect

Therapeutic Pool - Feasibility Study - Azilda Greater City of Sudbury

Budget Cost Analysis

Prepared by: YBA Project No. 13130
Date: 10-Jan-14

Budget class: Class "D" **OPTION A: Therapeutic Pool - Stand-alone**

Building Gross Floor Areas :

Pool footprint	902	sf
Change areas	1,274	sf
Admin, Services and circulation	2,838	sf
Renovated space	0	sf
Total of Building Gross Area	5,014	SF

Pool interior area 620 sf

				Total	SF Cost	% cost		
A1	SUBSTRUCTURE			\$ 350,700	69.94	15%		
A2	STRUCTURE			\$ 181,800	36.26	8%		
A3	EXTERIOR ENCLOSURE			\$ 303,900	60.61	13%		
B1	PARTITIONS & DOORS			\$ 104,900	20.92	5%		
B2	FINISHES			\$ 152,200	30.36	7%		
B3	FITTINGS & EQUIPMENT			\$ 422,500	84.26	18%		
C	SERVICES			\$ 385,600	76.90	17%		
D1	SITE WORK			\$ 59,500	11.87	3%		
D2	ANCILLARY WORK & DEMOLITION			\$ 22,500	4.49	1%		
Net construction costs - Including site				\$ 1,983,674	\$ 1,983,674	\$ 1,983,600	395.61	86%
Z1	Municipal & General Requirements			\$ 332,672	\$ 332,672			
	Building Permit	\$ 11.00	\$ 25,203					
	Contractor general requirements	10%	\$ 198,367					
	Contractor fee	5%	\$ 109,102					
	Site Plan agreement deposits							
TOTAL HARD CONSTRUCTION COST (Excl. HST)				\$ 2,316,346	\$ 2,316,300	461.97	100%	
Z2	Contingencies & Owner Cash Allowances			\$ 793,210	\$ 793,210			
	Development charges	sf \$ 10.11	\$ -					
	Design & Engineering Fees	8.0%	185,308					
	Design & Pricing Contingency	10%	250,165					
	Escalation Contingency - 2014	3%	75,050					
	Construction Contingency	10%	282,687					
TOTAL RECOMMENDED BUDGET (NO HST)				\$ 3,110,000	\$ 3,110,000	620.26		
TOTAL HST		NET	13.00%	\$ 404,300				
TOTAL ESTIMATED BUDGET				\$ 3,514,000	700.84			

The following items have NOT been included in the above budget:

Escalation beyond April 1, 2015
Supply and installation of equipment
Project Management and/or Clerk of the works
Site Survey

Legal fees
Costs for temporary facilities and Moving Cost
Relocation and Reconnection of Owner's Equipment
Salaries for owner's staff
Removal of hazardous substances
Third Party Commissioning / Start up
Environmental Assessment

HST - (as noted)
Geotechnical Investigation
Insurance
Signage
Communication Systems
Gas utility company charges and levies
Telephone utility company charges and levies
Telephone system and handsets
Revisions and upgrades to existing emergency power services
Revisions and upgrades to existing sewer and water services
Winter Construction
Development Charges

1 General

This cost analysis is intended to provide a realistic assessment of the costs associated with the above project. Accordingly, this cost analysis should only be considered in conjunction with the drawings and other documents associated with this project.

2 Cost Considerations

All costs are estimated on the basis of competitive bids being received from general contractors and all major subcontractors and suppliers based on a stipulated sum form of contract. Pricing shown reflects probable costs obtainable in the project area on the effective date of this report and is therefore a determination of fair market value for the construction of the work and not a prediction of low bid.

Cost escalation during the construction period is included in the unit rates used in this estimate and to a projected construction start date of Spring 2015.

A design and pricing contingency has been included to cover design development and pricing unknowns at this preliminary stage of the project. A construction contingency allowance has been adjusted to cover tendering and construction unknowns after the drawings are complete and a contract is awarded. Contingencies do not cover scope changes.

We have assumed extending services from the existing building to service this addition and that these services are reasonably accessible.

Refer to Exclusions for the other items that have been specifically excluded from this cost analysis.



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Therapeutic Pool - Feasibility Study - Azilda Greater City of Sudbury

Budget Cost Analysis

Prepared by:
Date:

YBA
10-Jan-14

Project No. 13130

Budget class:

Class "D"

OPTION B: Therapeutic / Leisure Pool Facility

Building Gross Floor Areas :

Pool area	1,818	sf
Change areas	1,169	sf
Admin, Services and circulation	2,027	sf
Renovated space	0	sf
Total of Building Gross Area	7,388	SF

Pool interior area	1,450	sf
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Floor interior area			1,430	SF			
					Total	SF Cost	% cost
A1	SUBSTRUCTURE				\$	502,400	68.00 16%
A2	STRUCTURE				\$	267,800	36.25 9%
A3	EXTERIOR ENCLOSURE				\$	381,200	51.60 12%
B1	PARTITIONS & DOORS				\$	129,000	17.46 4%
B2	FINISHES				\$	183,600	24.85 6%
B3	FITTINGS & EQUIPMENT				\$	573,600	77.64 19%
C	SERVICES				\$	498,500	67.47 16%
D1	SITE WORK				\$	68,200	9.23 2%
D2	ANCILLARY WORK & DEMOLITION				\$	24,000	3.25 1%
Net construction costs - Including site					\$	2,628,364	\$ 2,628,364 \$ 2,628,300 355.75 86%
Z1	Municipal & General Requirements				\$	440,790	\$ 440,790
	Building Permit	\$	11.00	\$	33,393		
	Contractor general requirements		10%	\$	262,836		
	Contractor fee		5%	\$	144,560		
	Site Plan agreement deposits						
TOTAL HARD CONSTRUCTION COST (Excl. HST)					\$	3,069,154	\$ 3,069,100 415.42 100%
Z2	Contingencies & Owner Cash Allowances				\$	1,051,001	\$ 1,051,001
	Development charges	sf	\$	10.11	\$	-	
	Consulting Fees			8.0%	245,532		
	Design & Pricing Contingency			10%	331,469		
	Escalation Contingency - 2014			3%	99,441		
	Construction Contingency			10%	374,560		
TOTAL RECOMMENDED BUDGET (NO HST)					\$	4,120,000	\$ 4,120,000 557.66
TOTAL HST		NET	13.00%		\$	535,600	
TOTAL ESTIMATED BUDGET					\$	4,656,000	630.21

The following items have NOT been included in the above budget:

Escalation beyond April 1, 2015
Supply and installation of equipment
Project Management and/or Clerk of the works
Site Survey

Legal fees
Costs for temporary facilities and Moving Cost
Relocation and Reconnection of Owner's Equipment
Salaries for owner's staff
Removal of hazardous substances
Third Party Commissioning / Start up
Environmental Assessment

HST - (as noted)
Geotechnical Investigation
Insurance
Signage
Communication Systems
Gas utility company charges and levies
Telephone utility company charges and levies
Telephone system and handsets
Revisions and upgrades to existing emergency power services
Revisions and upgrades to existing sewer and water services
Winter Construction
Development Charges

1 General

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Cost escalation during the construction period is included in the unit rates used in this estimate and to a projected construction start date of Spring 2015.

A design and pricing contingency has been included to cover design development and pricing unknowns at this preliminary stage of the project. A construction contingency allowance has been adjusted to cover tendering and construction unknowns after the drawings are complete and a contract is awarded. Contingencies do not cover scope changes.

We have assumed extending services from the existing building to service this addition and that these services are reasonably accessible.

Refer to Exclusions for the other items that have been specifically excluded from this cost analysis.