



Prepared for



Consultant Team

**FAULKNERBROWNS
ARCHITECTS**



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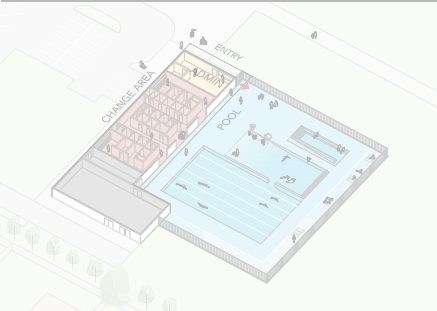
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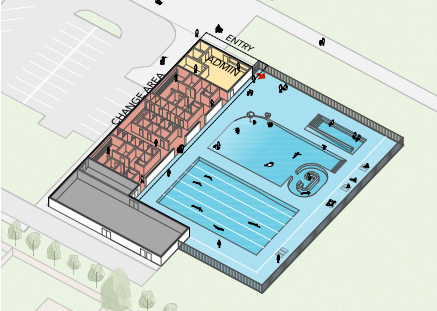
Pitt Meadows Aquatics Feasibility Study Youth Engagement Workshop

1.0 EXECUTIVE SUMMARY

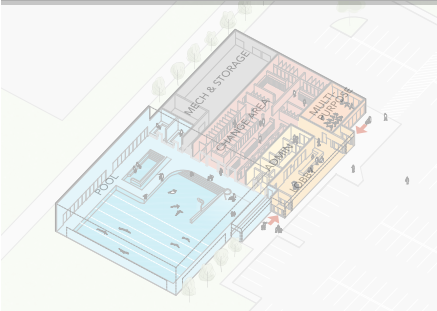
OPTION 1 Small Outdoor Pool



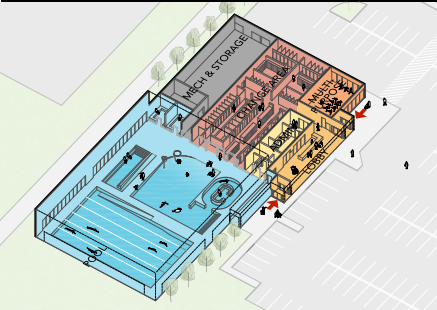
OPTION 2 Medium Outdoor Pool



OPTION 3 Small Indoor Pool



OPTION 4 Medium Indoor Pool



Design Options

1.1 INTRODUCTION

The Pitt Meadows Parks, Recreation and Culture Master Plan (2021) identified community interest in a new or renewed pool facility. Given the significant costs associated with aquatics infrastructure and the aging condition of Pitt Meadow's existing outdoor pool, the Master Plan report recommended that the City of Pitt Meadows undertake an aquatics feasibility study.

In Spring 2023, the City commissioned FaulknerBrowns Architects to complete an aquatics feasibility review, including context and market analysis, public engagement and consultation, design option development and cost estimation. The study identifies a range of indoor and outdoor aquatics facility options and their associated capital and operating cost impacts. The scope of work for this study is in tandem with long-term planning for City of Pitt Meadows Parks Projects, including Harris Road Park and Pitt Meadows Athletic Park.

1.2 PROJECT SCOPE AND METHODOLOGY

This study aims to support planning and decision-making for the long-term future of aquatics provision in the region. The Consultant Team collaborated with the City project team to analyze market context and probable levels of use, identify suitable sites, develop concept options and engage in a public consultation.

The Feasibility Study involved:

- Reviewing background policy and literature
- Reviewing existing facilities, operations and suitable sites
- Catchment area market analysis / aquatics asset review and benchmarking
- Public Survey 1 & Workshops with staff and user groups
- Development of concept design options
- Preliminary capital and operational costing for preferred design options
- Public Survey 2 and related engagement activities
- Final report and recommendations

1.3 CONCEPT DESIGN OPTIONS AND COSTING

Based on community market analysis, probable levels of demand for expanded aquatics services and public engagement input, the study proposes four concept options with associated implementation and operational cost estimates. Following the feasibility analysis and community consultation, two recommended concept options have been identified out of the four. These reflect two different levels of aquatics infrastructure investment and impact for taxpayers:

- Option 2 - Medium Outdoor Pool at Harris Road Park (estimated annual tax increase of \$157/year)
- Option 4 - Medium Indoor Pool at Pitt Meadows Athletic Park (estimated annual tax increase of \$466/year)

As with any decision to expand a municipal service, demand and rationale need to be balanced against the level of taxpayer impact deemed acceptable; and the level of acceptable risk that the City can justify assuming. While estimates contained within this report can be used to support long-term capital planning, it is recommended that updated costing review be completed closer to proposed construction timeline.



OUR OFFICIAL COMMUNITY PLAN VISION

To create a walkable community that offers a range of housing options, parks, recreation and public spaces, where residents are healthy and engaged, and where local businesses are flourishing.

GOALS

This OCP contains 12 goals that are a part of the future vision for Pitt Meadows. Objectives, policies, land use designations and development permit area guidelines all help to support the goals.

The goals have been shaped by input from community members, ḱičəy (Katzie) First Nation and stakeholders, research and analysis on specific issues, and by the enduring historical and cultural attributes of Pitt Meadows.

- 1 A community where the City and ḱičəy (Katzie) First Nation have a strong government-to-government relationship based on meaningful dialogue, inclusivity, and mutual respect grounded in the principles of reconciliation.
- 2 A community where agriculture is the dominant land use and farmland is protected for food production.
- 3 A community where the environment and natural areas are conserved and enhanced so they enrich the quality of life for all residents.
- 4 A community where the economy is vibrant and diverse, and local businesses are flourishing.
- 5 A walkable and compact community that offers easy access to nature and amenities, and has a range of housing options to suit all needs and through all stages of life.
- 6 A community where arts, culture, and heritage help define the Pitt Meadows unique identity, and where lifelong education helps make the city a great place for all residents.
- 7 A community with a strong sense of place and belonging, where residents are healthy and engaged, and feel safe and secure.
- 8 A community where parks, recreation, and public spaces contribute significantly to community character and quality of life.
- 9 A connected community that is easy to get around by all modes of transportation, and where commercial transport moves freely in and out of the community.
- 10 A community with an adequate and secure supply of clean, potable water and that handles sewage, waste, and storm water efficiently to protect public health.
- 11 A community where energy is conserved and used efficiently, and greenhouse gas emissions are minimized.
- 12 A safe community where property and landscapes are protected from risk or hazards due to flooding, steep slopes, and forest fires.

OCP Vision and Goals (2022) From Pitt Meadows Official Community Plan: I See Pitt Meadows 2040 adopted by Council on September 27, 2022.

2.0 BACKGROUND CONTEXT

Service Delivery Objectives



City of Pitt Meadows Parks Recreation and Culture Masterplan (2021) Service Delivery Objectives

ADDITIONAL RELEVANT POLICY AND REGULATIONS

- British Columbia Building Code (latest edition)
- B.C. Pool Regulation, B.C. Reg. 296/2010 (Public Health Act): B.C. Guidelines for Pool Design/Operations Interim Version 3, October 2021
- City of Pitt Meadows Zoning Bylaw 2505

2.1 RELEVANT POLICY BACKGROUND

Several specific planning documents and regulations were reviewed and referenced in preparing the Aquatics Feasibility Study, to ensure recreation facility planning is aligned with local policy, community goals and objectives. These frameworks and related documents were developed under the guidance of extensive public input. New development should aim to support these local growth strategies and their guiding principles.

CITY OF PITT MEADOWS PARKS, RECREATION AND CULTURE MASTERPLAN (2021)

Pitt Meadows' first-ever Parks, Recreation and Culture (PRC) Masterplan provides a strategic roadmap to guide service delivery and investment for recreation over the next 15+ years, helping inform decisions pertaining to facility investment, programming and partnerships. During engagement for the PRC Masterplan, residents identified interest in additional aquatics opportunities in the community with aquatics noted as a top priority.

PRC Masterplan Vision: Parks, recreation and culture services in Pitt Meadows reflect the unique character of the community and contribute to prosperity, community spirit, and wellbeing. - *Pitt Meadows Parks, Recreation and Culture Masterplan November, 2021*

CITY OF PITT MEADOWS OFFICIAL COMMUNITY PLAN (2022)

The Official Community Plan (OCP) is a long-range plan that sets out the community's vision, goal and objectives for the future of the City of Pitt Meadows, providing a renewed vision through 2040 and a framework to guide community development.

OCP Vision: To create a walkable community that offers a range of housing options, parks, recreation and public spaces, where residents are healthy and engaged, and where local businesses are flourishing. - *From Pitt Meadows Official Community Plan: I See Pitt Meadows 2040 (2022).*

2.2 PREVIOUS ASSESSMENT AND FEASIBILITY WORK

The following documents were referenced during the course of this feasibility study:

- Memo to Parks and Leisure Services Commission re: Construction of a Second Indoor Aquatic Facility *dated Feb 1, 1995*
- Pg 88-90 of Parks and Leisure Services Master Plan for Maple Ridge and Pitt Meadows *by PERC, dated June 28, 2001*
- Pitt Meadows Aquatic Centre Pool Terms of Reference for 2004 Study *by Don Cramb, Recreation Manager - West Area, dated 2003*
- Harris Park Pool Condition Report to Staff *dated June 9, 2004*
- Needs Assessment for an Indoor Aquatic Centre in Pitt Meadows, *by PERC dated Jan 6, 2004*
- Pitt Meadows Pool Planning Study Needs Assessment and Feasibility Study Presentation to Commission by Brian Johnson, *dated March 2005*
- Pitt Meadows Family Recreation Centre Indoor Pool Recommendations Staff Report *dated Jan 19, 2005*

2.3 THE AQUATICS SERVICES AND PLANNING CONTEXT

Providing aquatics services is a significant investment for municipalities, often representing the most subsidized aspect of recreation services. While costs to provide aquatics are high, so too is the demand in most communities, resulting in increasing investment across the Lower Mainland and beyond. Several factors are driving this high level of demand, including:

- The high value residents place on water safety and education;
- The relative affordability of leisure aquatics as a family activity; and
- The continually growing popularity of aqua-fitness programming.

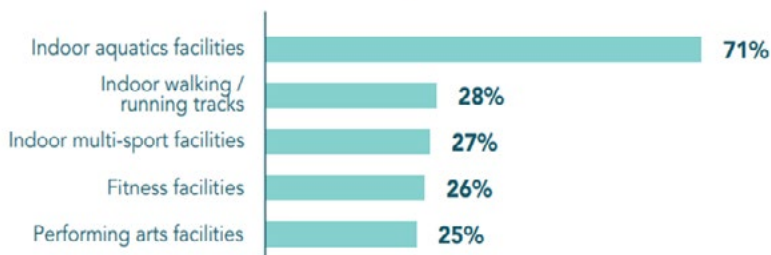
Engagement conducted for the City's new Parks, Recreation and Culture Master Plan validated both high levels of aquatics participation and demand amongst Pitt Meadows residents. However, while demand in the community has been demonstrated on numerous occasions over the past two decades there remains a question as to whether the tax base is able or willing to support an enhanced level of aquatics service.

CITY OF PITT MEADOWS PARKS, RECREATION AND CULTURE MASTERPLAN - RESIDENT SURVEY KEY FINDINGS (2021)

Indoor Activity Participation



Indoor Facility Priorities





Recreational Swimming



Fitness Swimming



Respite From Heat

The following graphic presents a basis for aquatics planning, organizing the types of aquatics experiences typically provided by the public sector into 9 Categories of Aquatics Services. Typically, water space at a pool is allocated in three ways as reflected by the 3 Modes of Operation. A unique aspect of aquatics facilities compared to many other types of recreation infrastructure is that all three modes can occur simultaneously.

Fig 1: Categories of Aquatics Services and Models of Operation

9 CATEGORIES OF AQUATICS SERVICES	3 MODES OF OPERATION		
	Drop-In	Program	Rental
Recreational Swimming (fun)			
Skill Development (swim lessons)			
Fitness Swimming			
Sport Training			
Special Events			
Therapy and Rehabilitation			
Leadership Training			
Respite from Summer Heat			
Water Orientation for Toddlers			

THE 3 MODES OF OPERATIONS DEFINED

Drop-In: Individuals can access pool time without needing to register in a program or be part of a club that rents pool time. Family swimming, casual/individual lane swimming, and simply using the hot tub or sauna are examples of drop-in swimming.

Program: Individuals register for an aquatics experience or opportunity to learn new skills. Swim lessons and aqua-fitness programs are examples of program based swimming.

Rental: Water space is booked by a third party from the operator. Swim club practices and meets, birthday party rentals, and bookings by physiotherapy clinics are examples of rental uses. The 9 Categories of Aquatics Services and 3 Modes of Operation will be used throughout this document when discussing potential needs and the regional aquatics services landscape.

2.4 CATCHMENT AREA PROVISION & BENCHMARKING

There are currently 8 municipally operated indoor pools within 20 km of Pitt Meadows, including 3 facilities within 10 km. As reflected by the following table, these facilities generally fulfill most aquatics services categories. For an additional point of reference comparison, the current Harris Road Outdoor Pool is included in the table to reflect categories that it fulfills as well as local aquatics services gaps within Pitt Meadows.

Fig 2: Aquatics Facilities within ~20km of Pitt Meadows

Categories of Aquatics Services	Harris Road Outdoor Pool and Spray Park	Maple Ridge Leisure Centre (7.4 km)	Port Coquitlam Community Centre (9.5 km)	Hyde Creek Recreation Centre (9.8 km)	Walnut Grove Community Centre (10.7 km)	City Centre Aquatic Complex (12.2 km)	Surrey Sport and Leisure Centre (17.0 km)	Guildford Recreation Centre (17.6 km)	Poirier Sport and Leisure Complex (18.5 km)
Recreation Swimming (fun)	✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
Skill Development (swim lessons)	✓	✓✓	✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
Fitness Swimming	✓	✓✓	✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
Sport Training		✓		✓	✓✓	✓✓	✓✓	✓✓	✓
Special Events		✓		✓	✓✓	✓✓	✓✓	✓✓	✓
Therapy and Rehabilitation	✓	✓✓	✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
Leadership Training		✓✓	✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
Respite from Heat	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
Water Orientation for Toddlers		✓✓		✓✓	✓✓	✓✓	✓✓	✓✓	✓✓

✓✓ = strongly fulfills the Category of Aquatics Service

✓ = moderately fulfills the Category of Aquatics Service

The following table looks more broadly at indoor and outdoor aquatics infrastructure supply in municipalities that are generally adjacent or accessible via major highway routes from Pitt Meadows. 36 total indoor and outdoor facilities serve the approximately 1.28 million residents in these municipalities which equates to the following levels of provision:

- 1 indoor pool for every 73,050 residents
- 1 outdoor pool for every 68,355 residents

Fig 3: Aquatics Benchmarking (Sub-Regional)

Municipality	Population	Indoor Pools	Outdoor Pools
Coquitlam	148,625	2	2
Port Coquitlam	61,498	2	2
T. Langley	132,603	2	1
C. Langley	28,963	0	1
Maple Ridge	90,990	1	1
Surrey	568,322	5	8
Burnaby	249,125	4	5
Total	1,280,126	16	20

KEY FINDING

There is a strong supply of aquatics infrastructure in the region, however gaps exist in Pitt Meadows and residents with limited transportation options or access are likely challenged with accessing the full array of aquatics services and experiences.

It is important to note that aquatics service levels in the lower mainland are stretched (more residents per available pool) when compared to other areas of the province – as is typically the case in most major urban regions with numerous municipalities located immediately adjacent to each other and where service levels for most publicly provided services cannot be offered at the same levels as smaller communities due to population volume.

Figure 4 reflects an overview of most municipalities in the province with populations ranging from 10,000 – 25,000 residents. As reflected in the table most of these municipalities provide indoor aquatics facilities. However, the following context is also important to consider when reviewing this benchmarking data:

- Many of these municipalities serve a broader catchment area and have funding partnerships with or through their regional district.
- A significant amount of 'legacy' aquatics infrastructure exists across the province (pools that were built during the 1980's and 1990's). Many smaller jurisdictions would struggle with building new facilities with present day construction costs.

KEY FINDING

The provision of an indoor aquatics facility in Pitt Meadows would provide a higher level of service than is the norm across the lower mainland, but would align with what other similarly sized municipalities in B.C.

Fig 4: Aquatics Benchmarking (B.C. municipalities with populations ranging from 10,000 - 25,000 residents)

Municipality	Population	Indoor Pools	Provision Level
Fort St. John	21,465	1	21,465
Dawson Creek	12,323	1	12,323
Cranbrook	20,499	1	20,499
Salmon Arm	19,432	1	19,432
Esquimalt	17,533	1	17,533
Lake Country	15,817	0	-
Oak Bay	17,990	1	17,990
Sooke	15,086	1	15,086
Port Alberni	18,259	1	18,259
Colwood	18,961	1	18,961
Nelson	11,106	1	11,106
Parksville*	13,642	0/1	-
Powell River	13,943	1	13,943
Prince Rupert	12,300	1	12,300
Terrace	12,017	1	12,017
Williams Lake	10,947	1	10,947
Coldstream	11,171	0	-
Sechelt	10,847	1	10,847
Summerland	12,042	1	12,042
Whistler	13,982	1	13,982
Average	15,300	1	15,593

*Parksville does not currently have a pool within City boundaries, but is a funding partner of the Ravensong Aquatic Centre (operated by the Regional District of Nanaimo in Qualicum Beach).

2.5 KEY TRENDS AND BEST PRACTICES

Presented in this section is a synopsis of broader regional, provincial, and national aquatics trends and best practices that provide valuable insights into aquatics experience preferences, demands, and emerging activity interests. Reviewing and considering trends and best practices helps supplement (and in some cases further validate) local engagement and demand analysis, while also offering potential learnings from other jurisdictions that can influence aquatics service provision at the local level.

KEY FINDING

As also validated through previous engagement in Pitt Meadows, a significant amount of aquatics demand occurring regionally, provincially, and nationally is for recreational (fun), skill development, fitness swimming experiences.

Aquatic Activity and Programming Trends

As user expectations for indoor recreation facilities have increased over time, so to have the types of experiences that individuals are looking to get through publicly provided aquatics services. Prevalent activity trends and changes include:

- Recreational swimmers are increasingly looking for exciting aquatic experiences such as aquatic playgrounds for those of all ages and abilities, lazy rivers, wave pools, surf machines, waterslides, etc.
- Swimming and all activity types are regaining popularity as people are looking for more spontaneous physical activities that fit into busy work/life schedules; working from home and contract work has also shifted when people look for recreational opportunities rather than there being a pre- or post-work rush.
- Swimming lessons are also growing in popularity, resulting in greater demand for lessons for those of all ages, particularly as such lessons are viewed as integral to physical literacy, skill development, and preventing injury/drowning. Some municipalities are experimenting with offering swimming lessons for children jointly with adult programming such as aquafit.
- Providing opportunities for all family members to take part in different activities simultaneously at the same location can increase participation levels, as well as a sense of convenience and satisfaction for residents. For example, while children participate in swim lessons, guardians may wish to grab a coffee and visit in social areas in sight of pool tanks.
- Wellness and therapy pool users are one of the fastest growing user segments for aquatic services, particularly in communities with aging populations. These users tend to require warmer water (e.g. 32 degrees Celsius), but can also benefit from access to cold water plunge tanks as well.
- Competitive swimmers have high expectations for facility design, and governing bodies also have certain standards for tank configurations, spectator seating areas, timing systems, and so forth. Modern training facilities should include amenities such as dive tanks, warm up pools, starting blocks, advanced timing systems, and scoreboards.
- Aquatic exercise, including swimming, water-based resistance training, or water aerobics, are increasingly popular activities among those looking for a low impact workout in a fun environment. Accessible community pools and therapeutic tanks are necessary amenities to support these types of activities.

- Pools are being designed to have multiple tanks and 'zones', such as quiet areas for rehabilitation and therapy, as well as for users with sensitivities to sound and/or light, training areas with one or more 50 m tanks, separate 25 m warm up tanks, 25 m leisure and recreation pools, hot tubs, and saunas. Increasingly, users expect multiuse spaces as the norm and service providers need to quickly adapt to meet community needs.
- Many aquatic facilities in Canadian municipalities are nearing end-of-life and significant reinvestment is required to meet changing user expectations and provide quality environments for aquatic activities, preferring to go to newer or more feature-equipped facilities. Municipalities must compete with the private sector in the form of hotels or resorts that may have newer or more attractive amenities.

Pools as Community Hubs

Pools are increasingly being viewed and designed as social gathering places – they are not just places to swim, but also places to gather and socialize. In many communities, indoor recreation facilities like pools also function as community hubs – both formally and informally – in addition to their primary function.

- Pools are being designed to accommodate spontaneous or drop-in users, as well as to provide critical social gathering spaces such as attractive lobbies or atrium areas, spectator viewing areas, meeting facilities, outdoor parks and green spaces, and indoor play equipment / child minding areas.
- Combination, or campus-type facilities, are also becoming more common. Such developments include not only core recreational amenities like gymnasiums, fitness centres, and aquatics facilities, but also public libraries, municipal service counters, creative or cultural venues, and so forth. By deliberately designing facilities to include social amenities, indoor recreation facilities can function as 'community living rooms' that enable greater levels of community cohesion and connectedness.
- Some pool amenities that may support the facility operating as community hub include providing fun features like aquatic playgrounds, wave pools, lazy rivers, saunas, lounge areas on pool decks, and food and beverage services.

User expectations for indoor recreation facilities are increasing over time, with greater demand for convenience amenities such as public WiFi, comfortable seating areas, child play areas, and other amenities.

By viewing indoor recreation facilities as community hubs, the facility audience shifts away from just primary users, but towards residents overall. Social gathering spaces can encourage residents to visit facilities during non-event or program hours to meet friends or family, or as simply part of their daily routines.

Multi-purpose, community-focused aquatic facilities tend to be highly utilized, valued by residents, and can act as 'draws' to areas, particularly those going through redevelopment.

Outdoor Aquatics Outlook

Over the past two decades the overall supply of public outdoor pools in British Columbia gradually declined based on a couple of factors:

- Increasing supply of indoor pools.
- Expanding aquatics preferences for experiences and amenities that are more suitably provided at indoor pools.
- Decreasing levels of use in some communities.
- The supply of larger, privately operated destination water parks in some regions.



Borden Park Natural Swimming Pool (Edmonton, AB)



Otter Co-op Outdoor Experience Waterpark (Aldergrove, BC)



Rendering of the +POOL under construction in New York, NY (floating pool that will use recycled water from the East River).

KEY FINDING

Overall trends indicators for outdoor aquatics provision are unclear, but do indicate that when outdoor pool infrastructure is provided there is a recognition of the need to be innovative and create unique experiences.

KEY FINDING

Staffing supply will impact operating hours and the ability to achieve identified programming objectives. The expanded provision of aquatics in Pitt Meadows should include an aggressive and innovative strategy to build up the roster of lifeguards and instructors.

However, there are some indications that demand for outdoor aquatics experiences may be increasing. Climate change and more intense periods of heat during the summer, changing recreation activity patterns as a result of the COVID-19 pandemic, and the cost escalation of building and operating indoor facilities are contributing factors to this potential trend evolution.

Identified below are some potential considerations, factors, and questions to monitor that may impact future outdoor aquatics demands and infrastructure provision:

- Are demands specifically for shallow or deep water aquatics experiences (e.g. should the focus be on creating dynamic splash experiences or are actual pools needed)?
- Emerging technologies in aquatics.
- The private waterpark marketplace.
- The success of hybrid facilities (e.g. the partially covered pools, natural swimming pools, etc.).

Additional Trends, Leading Practices, and Topics in Delivering Aquatics Opportunities Lifeguard and Instructor Staffing Challenges

Many aquatics service providers are struggling with on-deck personnel staffing shortages. A number of factors nationally are contributing to this issue, including:

- Changes to training program providers.
- The pause / cessation of aquatics leadership and training programs during the COVID-19 pandemic.
- Broader societal labour market challenges, dynamics, and lack of overall working age staff supply.
- Increases to the minimum wage – potentially making other part-time employment opportunities with lesser qualification requirements and levels of responsibility more appealing.

Staffing challenges within the aquatics services sector have come at a time when there is increasing demand, further exacerbating the situation for some operators. However, some jurisdictions across the lower mainland and province have experienced some success with new strategies aimed at building back the roster of lifeguards and instructors.

- Paid training and guaranteed employment programs.
- Focus on promoting the social benefits of pool employment.
- Relaxed hours of work requirements during the secondary and post-secondary year.
- Signing bonuses.

Adaptive Aquatics Programming

Adaptive aquatics refers to a specialized approach to aquatic activities and swimming instruction that caters to individuals with disabilities or special needs. It focuses on adapting traditional aquatic programs and techniques to meet each participant's unique requirements and abilities. Adaptive aquatics aims to provide a safe, inclusive, and enjoyable environment where individuals of all abilities can engage in water-based activities, gain confidence, improve physical fitness, and develop water safety skills.

Adaptive aquatics programs often involve trained instructors who have knowledge and expertise in working with individuals with disabilities. They may use various adaptive techniques, equipment, and aids to accommodate the specific needs of participants, such as flotation devices, or modified swimming techniques. The program may also consider individualized goals, preferences, and any necessary accommodations to ensure a positive and successful experience for participants.

To ensure participants with physical or intellectual disabilities receive the same level of services, programming may be required to be adapted. There are several best practices related to offering the highest level of programming some techniques include:

- Intake forms; gain an understanding of swim history, abilities, communication styles, triggers, etc.
- Utilizing likes to your advantage- learning what the participants' favourite tv show characters are, food, or animals and utilizing those items during teaching.
- Instructional planning: instructors should create detailed lesson plans to ensure a smooth transition between each activity, incorporating time for play and sensory activities to ensure prolonged attention.
- Learn the limitations - Understanding the participants' limitations, and practicing patience and modifications related to the limitations.

2.6 RECOMMENDED FACILITY PROGRAM CONSIDERATIONS

Summary

There is a clear demand for expanded aquatics experiences and services in Pitt Meadows and sound rationale for the providing it. However, as with any decision to expand a municipally provided service, demand and rationale need to be balanced with the following two critical factors:

- The level of taxpayer impact deemed acceptable; and
- The level of acceptable risk that the City can justify assuming.

As previously identified in this document, benchmarking provides a contrasting perspective on aquatics provision in Pitt Meadows. While a regional (lower mainland) comparison does not suggest that the City is deficient by not currently providing an indoor aquatics facility, many other municipalities in other regions of the province with a population ranging from 10,000 – 25,000 residents do provide this amenity. The broader catchment area surrounding Pitt Meadows is well supplied with aquatics facilities with the likelihood of additional facilities coming online over the next decade. While the rationale in other communities for these facility projects will be to meet identified aquatics capacity challenges and serve residents within their respective municipalities, individuals in a dense urban region like Metro Vancouver regularly cross jurisdictional boundaries to access aquatics services – therefore providing some benefit and access to a broader catchment area.

The costs associated with indoor aquatics often presents the greatest level of risk to public sector providers of recreation services. As expenditures for operating indoor aquatics are relatively fixed, having too much unused water capacity will result in higher subsidy levels and poor value to taxpayers. Typically, achieving 3 swims per capita is a minimum baseline level of acceptable use to justify operating an indoor aquatics facility with 5-7 swims per capita an optimal scenario.

The costs associated with indoor aquatics often presents the greatest level of risk to public sector providers of recreation services. As expenditures for operating indoor aquatics are relatively fixed, having too much unused water capacity will result in higher subsidy levels and poor value to taxpayers. Typically, achieving 3 swims per capita is a minimum baseline level of acceptable use to justify operating an indoor aquatics facility with 5-7 swims per capita an optimal scenario.

Figure 6: Indoor Aquatics Service Levels

Annual Swim Visits Per Capita	Typical Level of Use of Available Water Capacity	Probable Aquatics Services Impacts
<3	Low	<ul style="list-style-type: none"> – Suggests a fairly significant underutilization of available aquatics facilities or that the existing types of water spaces / amenities are very poorly aligned with needs (in some instances triggering the need to explore capital investment to provide more suitable aquatics infrastructure or divestment from aquatics services). – The cost per swim visit is high.
3 – 5	Moderate	<ul style="list-style-type: none"> – Generally acceptable but with opportunities to continue expanding use of available capacity and lower the cost per swim visit.
5 – 7	Optimal (High)	<ul style="list-style-type: none"> – Aquatics facilities are optimally utilized within this range, resulting in good facility value to taxpayers (lower level of cost per swim visit).
7+	Very High	<ul style="list-style-type: none"> – Aquatics facilities may begin to experience capacity challenges that could impact the ability to meet all targeted aquatics service category needs.

* The term "swim visits per capita" reflects the total number of annual swim visits per resident (e.g. if public aquatics facilities in a community accommodate 50,000 annual swims for a municipal population of 10,000 residents, we'd say that community has 5 swim visits per capita). A swim visit reflects every time a patron uses the pool, not the number of residents that are users of the pool.

To achieve at least 3.5 – 4.5 swims per capita, an indoor aquatics facility in Pitt Meadows would need to accommodate between 79,156 and 101,772 swims based on 2026 population growth projections, increasing by a couple thousand swims every five years in lockstep with population growth.

For contextual purposes, accommodating 79,156 to 101,772 annual swims would be:

- Approximately 30 - 50% of the Maple Ridge Leisure Centre Pool use (prior to renovations and pandemic shutdown disruptions between 2018 and 2022) as well as Comox Valley Aquatics Centre use.
- Generally similar levels of use to the North Peace Leisure Pool in Fort St. John and the Ravensong Aquatics Centre in Qualicum Beach.
- Approximately 20-25% of use at the Poirier Sport and Leisure Centre in Coquitlam.

Figure 7: Potential Pitt Meadows Indoor Aquatics Facility Use Requirements

	Total Annual Indoor Swim Visits (2026)	Total Annual Indoor Swim Visits (2030)	Total Annual Indoor Swim Visits (2040)
<i>Estimated Population</i>	22,616	23,200	24,170
3.5 annual swims per capita	79,156	81,200	84,595
4.5 annual swims per capita	101,772	104,400	108,765
5.5 annual swims per capita	124,388	127,600	132,935

For outdoor aquatics, 0.5 to 0.75 annual swims per capita is a reasonable benchmark for a municipality that either provides indoor aquatics or (as is the case in Pitt Meadows) has multiple options in nearby jurisdictions. 0.75 – 1.0 annual swims per capita would be an optimal level of annual outdoor swim visit per capita. Figure 8 reflects the number of outdoor swim visits Pitt Meadows would need to accommodate at a new outdoor aquatics facility to achieve these potential performance markers based on anticipated growth. For context, the current Harris Road Outdoor Pool currently accommodates approximately 5,700 annual swim visits (0.3 per capita). Given the limitations of the existing facility and ability to accommodate a much wider array of aquatics experiences and services, it is reasonable to assume a significantly higher level of use at a new and expanded outdoor aquatics facility in Pitt Meadows.

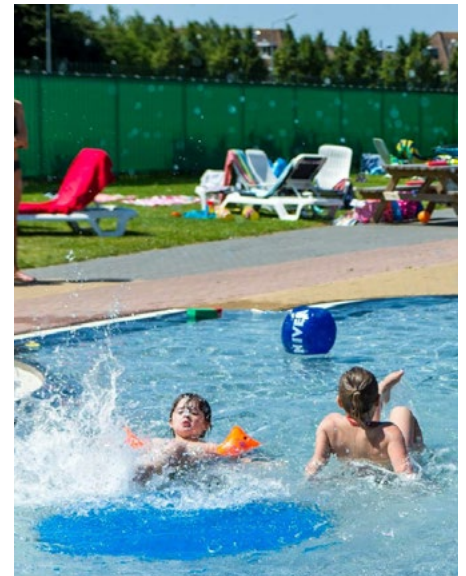
Figure 8: Potential Pitt Meadows Outdoor Aquatics Facility Use Requirements

	Total Swim Visits (2026)	Total Swim Visits (2030)	Total Swim Visits (2040)
<i>Estimated Population</i>	22,616	23,200	24,170
0.5 swims per capita	11,308	11,600	12,085
0.75 swims per capita	16,962	17,400	18,128
1.0 swims per capita	22,616	23,200	24,170

Recommended Facility Program Considerations

Identified below are recommended considerations that should be taken into account as facility program options are developed and refined.

- As Pitt Meadows is at the threshold of a municipality that can typically afford to provide a modern indoor aquatics facility at current day capital and operating costs, there is a much higher risk of overbuilding as compared to the situation in a larger jurisdiction. As such, the indoor pool program options should be contained as much as possible with the goal of operating the facility at as close to capacity as possible.
- Both the indoor and outdoor program options should place a primary focus on the following categories of aquatics services: recreational swimming (fun), skill development, and fitness swimming.
- Under no circumstances should the City consider operating both indoor and outdoor facilities as the population size is not large enough to support both, with a high risk of two facilities cannibalizing each others use potential.
- A hybrid indoor-outdoor pool option or outdoor pool with amenities that enable use into the spring and fall shoulder seasons could be considered as an alternative to providing an indoor pool. However, it is likely that the pool would operate well under capacity during shoulder seasons which would have an impact on operating costs. The annual subsidy associated with this option could end up being relatively similar to an indoor pool if operated for the majority of the year due to the likelihood of lower levels of use outside of prime summer months.

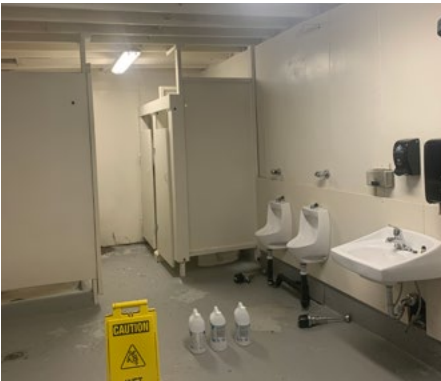




Looking northwest toward pool entrance



Looking east toward pool change facility



Men's change room



Chemical storage room

The existing Harris Road Outdoor Pool operates at full capacity in the summer months only, with limited aquatic programming space.

2.7 EXISTING FACILITY REVIEW: HARRIS ROAD POOL

Background

The Harris Road Pool is a small outdoor pool facility at the northeast of Harris Road Park next to Lougheed Highway. It consists of a 60' x 4 lane lap pool, men's and women's change rooms and washrooms, storage, first aid room and chemical storage room. The facility was built in the 1940's from community donations. In 1969, the pool systems were upgraded with trough skimmers, additional piping and a filtration system.

The pool is now approx 80 years old and past the end of its useful life. Its small size limits programming opportunities, and highway noise can be obtrusive. Maintenance staff have identified surge tank overflow issues north of the pool, and general drainage issues given that the highway stormwater pipe is at a higher elevation than the pool. There are also drainage issues between the existing pool and adjacent spray park. The main drain shutoff valve has been identified as leaking for many years, though the cost of replacement has been noted as too onerous to investigate.

Operations, Programming and Use

Harris Road Outdoor Pool is serviced by third-party provider Recreation Excellence and is in operation during the months of July and August, offering public swims and limited swimming lessons. In 2022, the pool received a total of approx 5,660 visits and operated at 88% capacity, offering swimming lessons to 36 children. Due to size limitations, swimming lessons are only offered up to Level 5.

The pool is drained at the end of each season for winterizing.



Harris Road Outdoor Pool in summer



Existing Harris Road Outdoor Pool Context Plan

3.0 ENGAGEMENT 1

The consultant team sought preliminary input from staff and community members through a series of workshops and an online survey in order to identify the concept design goals of the project and community aquatics needs to inform the development of Concept Design Options.

HIGH LEVEL PROJECT GOAL

"to better understand the range of indoor and outdoor aquatics facility options and their associated capital and operating cost impacts."

- From Pitt Meadows Parks, Recreation and Culture Masterplan November, 2021

REFLECTING ON OBJECTIVES AND IDENTIFYING VALUE PRIORITIES

Building off of the City of Pitt Meadow's project objectives, the Consultant Team workshopped with the project team, City staff and the Parks, Recreation and Culture Advisory Committee to capture and understand the project's main drivers. These were used to review the Concept Design Options for suitability in meeting community resources and needs.

*Note: Considerations are not listed in any particular order of priority.

3.1 CONCEPT DESIGN OBJECTIVES

Meets community needs & responds to demand	<ul style="list-style-type: none"> — Build on Probable Levels of Use and Market Capacity — Expand recreation opportunities to meet a range of needs — Explores opportunities for co-location and partnerships — Involves Community Input and Engagement — Capitalize on and complement other communities offerings — Extend operation season of pool (ideally 4 seasons)
Cost Impacts	<ul style="list-style-type: none"> — Efficient Service Delivery — Ensures Best Value for Money — Sets realistic expectations about available land and spaces — Consider funding options, service delivery, operational partnerships, lease spaces and private rental — Consider existing conditions
Building a sense of place & uniqueness	<ul style="list-style-type: none"> — Environment and natural areas are conserved and enhanced so they enrich the quality of life for all residents — Facility grounded in uniqueness of community (focused on family-friendly activities vs traditional competitive sport) — Grassroots-style community facility — Neighbourly facility/ integrated with community — Create an innovative, different, unique atmosphere — Do not detract from natural beauty and character of Pitt Meadows (skyline and views)
Fostering belonging, inclusivity & accessibility	<ul style="list-style-type: none"> — Multi-generational, welcoming and equitable spaces for all — Cultural recognition/grounded in principles of reconciliation — Reduce financial barriers to participation e.g. location, cost — Inclusive to people requiring health, therapeutic needs — Pet friendly — Ensure engagement process is accessible to all
Promote wellness & quality of life	<ul style="list-style-type: none"> — Support physical and mental health across all ages, interests and diverse ability levels — Enable social connections and interactions — Increase opportunities for families, youth and seniors to participate — Encourage active living — Consider quality of space/create an enjoyable space
Health & Safety	<ul style="list-style-type: none"> — Skill-development and training, incl. swimming as life skill — Create a safe space for residents to recreate — Quality of experience (cleanliness, health, sanitation) — Safe access and walk-ability to facility

3.2 WORKSHOPS

Engagement workshops were held with City Staff, the Parks Recreation and Culture (PRC) Advisory Committee and children, summarized below.

Staff Workshop

An online workshop was held with City of Pitt Meadows staff members on April 12, 2023. 9 staff were in attendance. The team conducted a group values exercise workshop activity (refer to Objectives chart on previous page).

PRC Advisory Committee Workshop

A workshop with the Parks, Recreation and Culture (PRC) Advisory Committee was held at Pitt Meadows City Hall on April 20, 2023. 13 participants were in attendance. The team conducted a values exercise (refer to Objectives chart on previous page) and Aquatics Opportunities Priorities Exercise (pictured at left), and Siting Opportunities Exercise to gather feedback regarding potential location for a new aquatics facility.

Children's Workshop

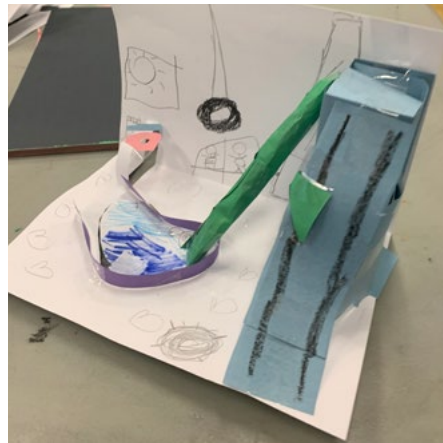
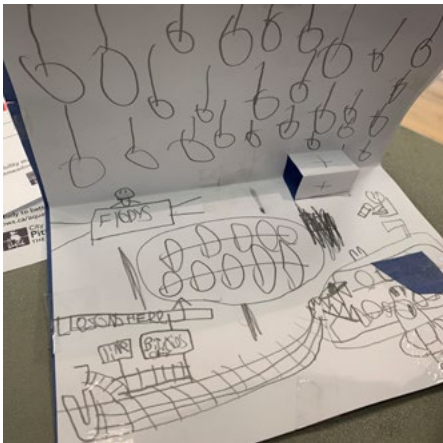
A workshop was held on May 1, 2023 at the Pitt Meadows Family Recreation Centre with two after-school care groups, aged 5 - 10 years. There were 21 participants in total. Activities included an on-site card modelling exercise "Build-a-pool" and take-home drawings/colouring sheet trampolines, hot tubs. Frequently included amenities: waterslides, swings, trampolines, hot tubs.

Children's comments included:

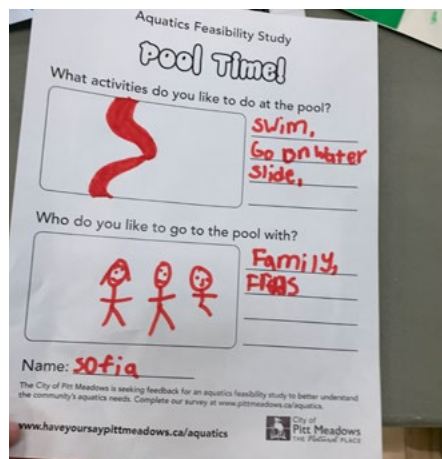
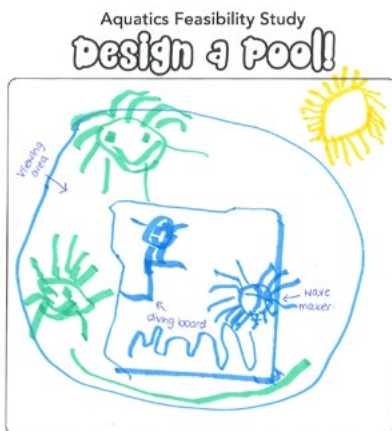
- Prioritization of aquatics for 'fun with family and friends' and skills development i.e. 'not everyone can swim'
- Interest in Inclusivity (provisions for wheelchair users, people who 'don't have legs' and small children who can't yet swim)

WORKSHOP KEY LEARNINGS

- Strong support for family fun & play; fitness; exercise.
- Lower support for competition hosting



PRC Advisory Committee Workshop, April 2023



Children's Workshop Activities



PRC Advisory Committee - Aquatics Opportunities Exercise

3.3 PUBLIC SURVEY 1

An online survey was available from April 17 to May 8 2023 via an open access link from the City of Pitt Meadows Have Your Say web portal. Hard copy surveys (trifold brochures) were made available at City Hall and the Pitt Meadows Family Recreation Centre.

The survey included questions about what aquatics activities, priorities and amenities are importance to respondents, where and how often they currently use aquatics facilities, and what types of facilities they would be be willing to pay a tax increase to support in Pitt Meadows. The survey was open and cannot be deemed to be statistically representative/reliable, but had good overall interest and participation.

- Over 1,100 respondents
- Over 2,100 site visits

Refer to Appendix A for a summary of Survey 1 results.



Social media post



Rec Centre Poster

3.4 COMMUNICATIONS CAMPAIGN

The survey was promoted through the following channels:

- Newspaper Ad
- Rec Centre Poster/TV Screen
- Social Media (6 posts)
- Have Your Say Dedicated Website
- Web Spotlight on City Website
- City Talks Newsletter

3.5 KEY INDICATORS FROM THE PUBLIC ENGAGEMENT

The following table summarizes key findings from Survey 1 that offer important insights into aquatics needs and the types of pool options that may be considered.

Figure 5: Public Survey 1 Key Findings Summary

Key Finding	Supporting Evidence from the Survey
Recreational, skill development, and fitness swimming are the aquatics service category with the most perceived need and demand in the community.	<ul style="list-style-type: none"> – The three aquatics activities that respondents identified as being most important to them were family fun and play (68%), leisure / relaxation (57%), and fitness / exercise (56%). – Similarly, the top three aquatics experiences that respondents identified as being most important to their household were family swim times (63%), swimming lessons (60%), and classes (35%).
A significant number of residents are leaving the community to meet their aquatics needs and are doing so frequently.	<ul style="list-style-type: none"> – Survey respondents identified the Harris Road Outdoor Pool as their fifth most used facility. – Most survey respondents indicated that they visit aquatics facilities weekly or almost weekly.
Proximity and quality of experience factors drive aquatics facility use.	<ul style="list-style-type: none"> – Over three -quarters (84%) of survey respondents identified proximity as a factor that influences the facilities their household uses. – Approximately 40% of survey respondents also identified quality and availability of programming / lessons and the appeal of shallow water aquatics areas and amenities.



Harris Road Park Existing Facility

4.0 SITES

4.1 SITE OPTIONS

Four site options were initially reviewed to accommodate a future aquatics facility:

- Harris Road Park
- Pitt Meadows Family Recreation Centre
- Pitt Meadows Athletic Park
- South Bonson Community Centre

South Bonson Community Centre and Pitt Meadows Family Recreation Centre were determined not to have required area to support a new facility and required infrastructure supports. Harris Road Park and Pitt Meadows Athletic Park were identified as feasible and worthy of further exploration.



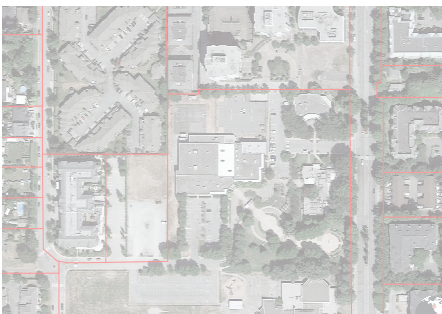
Harris Road Park



South Bonson Community Centre



Pitt Meadows Athletic Park



Pitt Meadows Family Recreation Centre



Harris Road Park



Pitt Meadows Athletic Park

4.2 HARRIS ROAD PARK

Location

Harris Road Park is located in central Pitt Meadows, just east of Harris Road and south of Lougheed Highway. The site contains the Harris Road Outdoor Pool, a splash park, playground, three baseball diamonds, two soccer fields, the Youth Action Skate Park, and ample green space. The northeast portion of the park contains a grove of mature trees with ample shade, and a walking path cuts across the park in the east-west direction, providing strong pedestrian connections. There are favourable views to the Golden Ears mountains to the north, however highway noise presents significant acoustic challenges to the northern portion of the park. Per the City of Pitt Meadows Parks and Recreation Masterplan, Harris Road Park will evolve in the future to support 'spontaneous use' activities.

Neighbourhood Context

Lougheed Highway to the north of the site is a major vehicle artery throughout the region. The surrounding community to the immediate south and east of the site is mostly suburban residential. Harris Road to the west serves as a gateway to the Pitt Meadows city centre from Lougheed Highway and as such is lined with shops + community services, including the Langley Farm Market and Pitt Meadows Heritage Hall. Harris Road also provides public transit access. In addition, the West Coast Express Pitt Meadows stop is located two blocks south of Harris Road Park, providing convenient train access.

Future Site and Adjacent Development

Planning will soon be underway for a reimagining of the Harris Road Park site. In addition to the overall park redevelopment, the current washroom block south of Harris Road Pool will be replaced by a larger washroom facility in the near future. A new RCMP headquarters is planned to the west of the site next to the skate park, which will reduce available parking and require a relocation of the northern baseball diamond. Commercial sites north of the future RCMP may be available for purchase to provide additional parking. In the long-term future, the adjacent land north of Lougheed Highway may be developed and could include postsecondary educational use.

City Zoning

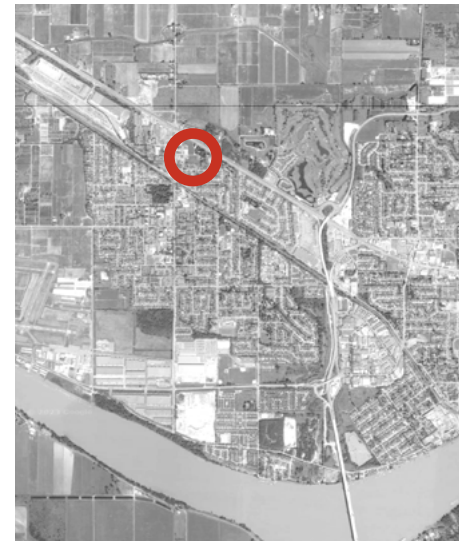
Harris Road Park is zoned as P1 - Community Assembly Zone. Adjacent zoning to the south and east is RS - Large Lot Residential, with C-3 - Community Commercial to the west and C-1 - Highway Commercial as well as A-1 - General Agricultural to the north.

Parking

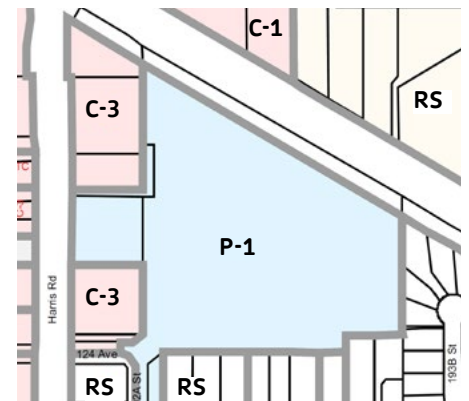
There are 110 parking stalls (including 4 accessible stalls) west of the site, though they are shared between the park, Heritage Hall, and the soon to be relocated Art Gallery. The parking count will be increased to approx 124 spaces (including 6 accessible stalls) with the completion of the future RCMP headquarters. Existing commercial spaces north of the RCMP headquarters may be purchased for more parking space, at additional cost.

Address

12474 Harris Road,
Pitt Meadows, BC V3Y 2J4



Harris Road Park Location



Pitt Meadows Zoning



Key - Site Context

- | | | | | |
|---------------------|---------------------------------------|----------------------------------|-------------------|-----------------|
| 1. Harris Park Pool | 5. Baseball Diamond | 8. RCMP (future) | 11. Farm Market | Walking/Cycling |
| 2. Splash Park | 6. Baseball Diamond (to be relocated) | 9. Art Gallery (to be relocated) | 12. Parking | Cycling |
| 3. WC (future) | 7. Skate Park | 10. Heritage Hall | 13. Train station | Bus |
| 4. Playground | | | | Train |
| | | | | Highway |

4.3 PITT MEADOWS ATHLETIC PARK

Location

Pitt Meadows Athletic Park is located in southern Pitt Meadows at Bonson Road and Airport Way. Site access is from Aljumaili Ave, with ample parking. At the northwest portion of the site is the Pitt Meadows Arena Complex, with pickleball, tennis and basketball courts to the northeast. The park is peppered with baseball and softball diamonds and contains plentiful open green space, with a playground and adjacent washroom amenity building at the centre. A rectangular walking path bisects the park. Per the City of Pitt Meadows Parks and Recreation Masterplan, Pitt Meadows Athletic Park will evolve as the city's hub site for outdoor sports.

Neighbourhood Context

The neighbourhood north of the park is primarily residential and includes a secondary school and a smaller park. Pitt Meadows Community Garden is immediately east of Bonson Road. South of Airport Way is a residential neighbourhood zoned for townhome development, as well as a greenfield owned by the School District. West of the site is a construction site for a future business park. Public transit access is provided via Bonson Road.

Future Site and Adjacent Development

Development is underway for a business park to the west of the site, part of which includes 8 acres of space that will be incorporated into the Athletic Park. This will include a new baseball field and likely a covered-sport box. South of the community garden to the east of the site has been subject of discussion for a future environmental education centre, however there are no immediate plans to proceed at this time.

City Zoning

Pitt Meadows Athletic Park is zoned as P1 - Community Assembly Zone. Adjacent zoning to the north is primarily RS, RS-1 and RS-2 residential zoning, to the east is A-1 - General Agricultural, to the south is CD-L Comprehensive Development Zone L (for future townhome development), and to the west is I-3 - Light Industrial Business Park.

Agricultural Land Reserve

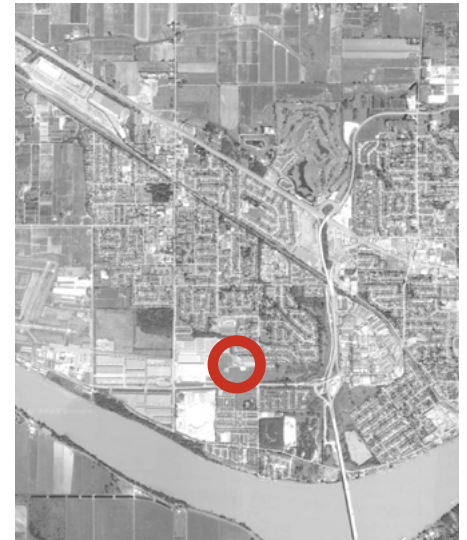
The Pitt Meadows Athletic park and adjacent land to the east fall under Agricultural Land Reserve zoning. The Agricultural Land Reserve has approved use of this land for recreational facilities.

Parking

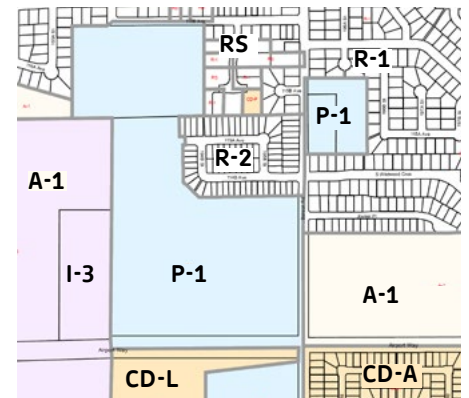
There are 366 parking stalls (including 11 accessible stalls) shared between the various amenities at the park, including the arena.

Address

11431 Bonson Road,
Pitt Meadows, BC V3Y 2B5



Pitt Meadows Athletic Park Location



Pitt Meadows Zoning



Agricultural Land Reserve - Green



Key - Site Context

- | | | | | |
|----------------------|-------------------------------|------------------------|----------------------|-----------------------------------|
| 1. Arena Complex | 5. Caretaker Building | 9. Washroom facility | 12. Daycare | Walking/Cycling
Cycling
Bus |
| 2. Parking | 6. Baseball/Softball Diamonds | 10. Future Park Space | 13. Secondary School | |
| 3. Tennis Courts | 7. Community Garden | 11. Future Development | | |
| 4. Basketball Courts | 8. Playground | | | |

4.4 PARKING AND ACCESS

Vehicular Access & Parking

The approach for both sites is to create new, expanded parking available for both the new Aquatic Centre and other existing amenities. Both park sites are anecdotally reaching demand limits during periods of peak usage on weekends, and are at capacity during event modes. The concept design shows the increase in parking area for the new/renewed facilities can be met through extension of surface parking with landscaping buffers, and stormwater retention features such as bioswales, as required.

Given the City of Pitt Meadows Parking Bylaw and the Institute of Transportation Engineers (ITE)'s Parking Generation Manual do not have a land use type that is specific to an aquatic facility, previously observed parking demand rates for other aquatic facilities in the Lower Mainland are used to estimate the increased parking demand of the proposed design options. For the purposes of the Feasibility Study, an approximate off-street parking requirement has been applied based on demand approach referencing Lower Mainland aquatics facilities of similar scale and program:

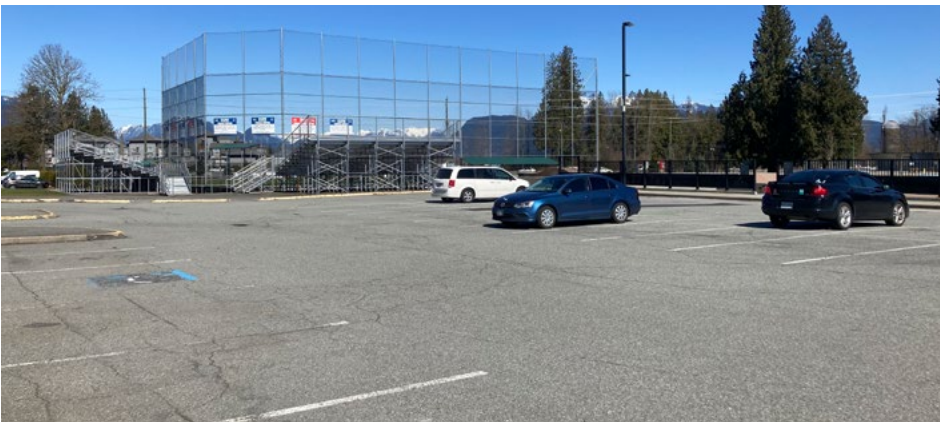
Parking Provision Rate Indoor Aquatics Facility: 3.20 vehicles/1,000 sq ft GFA*

Outdoor Aquatics Facility: 2.8 vehicles/1,000 sq ft GFA

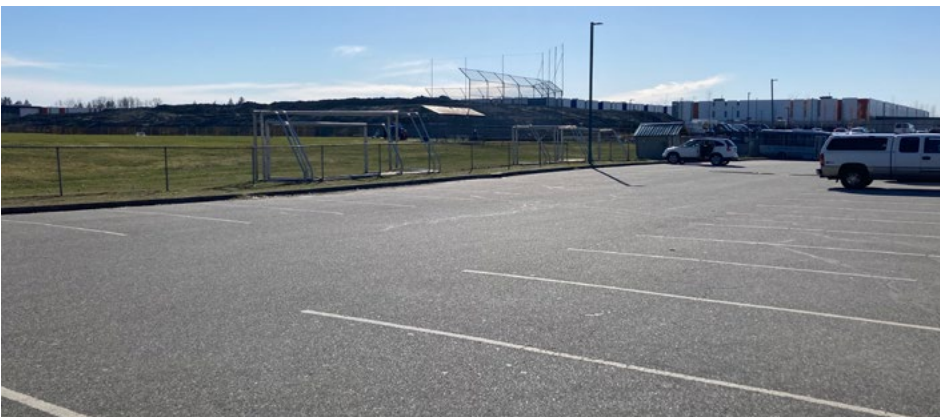
*ITE Parking Generation Manual: Average Peak Period Parking Demand Land Use 495 Recreational Community Centre - Suburban Sites

Bicycle Parking

Requirements were determined based on City of Pitt Meadows Zoning Bylaw 2505: 15% of required auto spaces



Existing Parking at Harris Road Park



Existing Parking at Pitt Meadows Athletic Park

5.0 CONCEPT DESIGN

5.1 DEVELOPMENT DIRECTION

As part of the Feasibility and Concept Design Review, Design Options were analyzed and evaluated through a series of 'workshop' style meetings with City of Pitt Meadows staff.

From a selection of High Level Program and Location Options, a long-list of Draft Design Options were developed. These were reviewed systematically against various impact considerations towards preferred Concept Design that would be developed in more detail and costed.

Considerations

- Replacing existing facility will not meet community demand/ garner support, based on Engagement 1 input
- Constructibility, building efficiency, compactness, envelope to volume ratio, complexity of construction
- Accessibility, circulation, guarding views and visibility, operational impacts, access and control
- Minimizing impact/displacement of existing park amenities
- Parking/site access and accessibility
- Connection to other park amenities and existing parking
- Site specific: acoustic considerations, views, impact to neighbours.

SCALE + PROGRAM

Market analysis and benchmarking helped to determine optimal:

- Scale of facility (optimal number of annual visits)
- Program (recreation, fitness and skill development)

5.2 HIGH LEVEL STRATEGIC PROGRAM OPTIONS

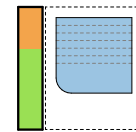
Outdoor

Renovate Existing Pool



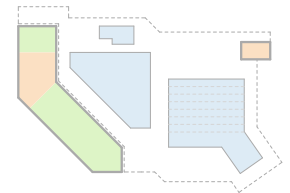
- Refurbishment of existing 18.3m x 4 lane pool
- New change rooms, staff + support spaces

Small to Medium Outdoor Pool



- 25m x 6 lane lap + leisure pool with family fun features
- Optional hot pool
- Change rooms, staff + support spaces

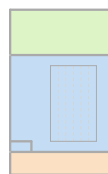
Large Outdoor Pool



- 25m x 8 lane lap pool
- Leisure pool with lazy river + family fun features
- Family hot pool
- Change rooms, staff + support spaces

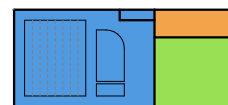
Indoor

Compact Indoor Pool



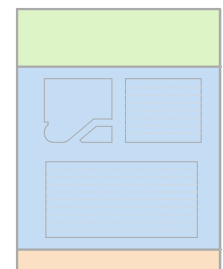
- 25m x 6 lane pool
- Lobby, change rooms, staff + support spaces
- Steam room

Small to Medium Indoor Pool



- 25m x 8 lane pool
- Leisure pool with family fun features
- Steam room/sauna
- Family hot pool
- Lobby, change rooms, staff + support spaces
- Program room

Large Indoor Pool



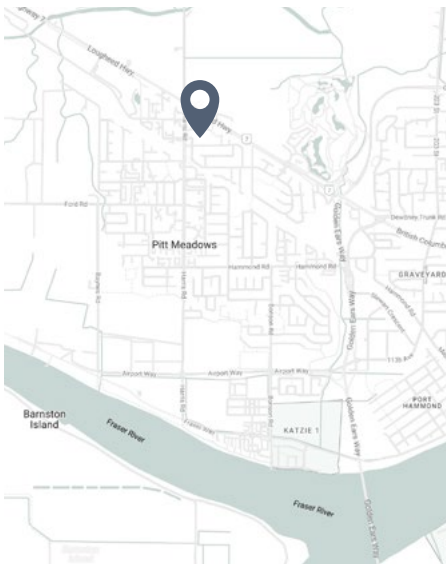
- Competition pool (50m)
- 25m x 8 lane lap pool
- Large leisure pool with lazy river + family fun features
- Steam room
- Family hot pool
- Lobby, change rooms, staff + support spaces
- Program rooms

OUTDOOR POOL OPTIONS

SITE

The outdoor pool options are sited on the South-West corner of Harris Road Park. This places the building away from the noise of Lougheed Highway with its parking and loading areas easily accessible from the street. This location allows one of the existing ball diamonds to remain intact and runs near the multi-use path, providing easy access for local residents by bike or walking.

The indoor pool options were not located here as the required building and parking area would take up too much of the existing park land area.



PRIMARY DIFFERENCES

The two outdoor options, while similar, have a few key differences. The small outdoor pool consists of one tank, which means that the lap and leisure pools will run at the same temperature, while in the large option these pools are split, which allows for finer control of the temperature to suit both exercise and leisure activities.

While the change rooms were generally only sized during this study, a more detailed design of the building would result in marginally smaller change rooms and mechanical systems for the smaller pool.

The medium pool has one additional feature over the small pool, which is the addition of a lazy river, which expands the features of the pool for the public.

BUILDING AMENITIES

The outdoor pool options feature a range of amenities, identified below:

1 Leisure Pool



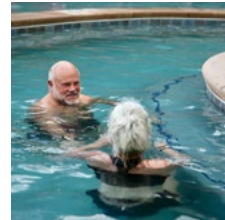
2 Water Features



3 Lane Pool



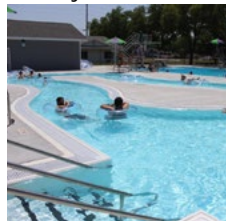
4 Hot Pool



5 Lounging Deck



6 Lazy River



HYBRID OPTION

For Option 2, a separate price was provided for the addition of a covered long-span pool structure with gas-fired heaters over the lap pool, similar to the Aldergrove Otter Co-op Outdoor Experience (pictured below).

Estimated Additional Construction Cost: \$2,467,000.



Aldergrove Otter Co-op Outdoor Experience

OPTION 1 - SMALL OUTDOOR POOL

A small outdoor pool located at the southwest corner of Harris Road Park, featuring a combined 25 m by 6 lane lap pool and leisure pool, a hot pool and deck space for lounging. The leisure pool includes a beach-style entry and fun spray features. This pool would be open for 5 months of the year.

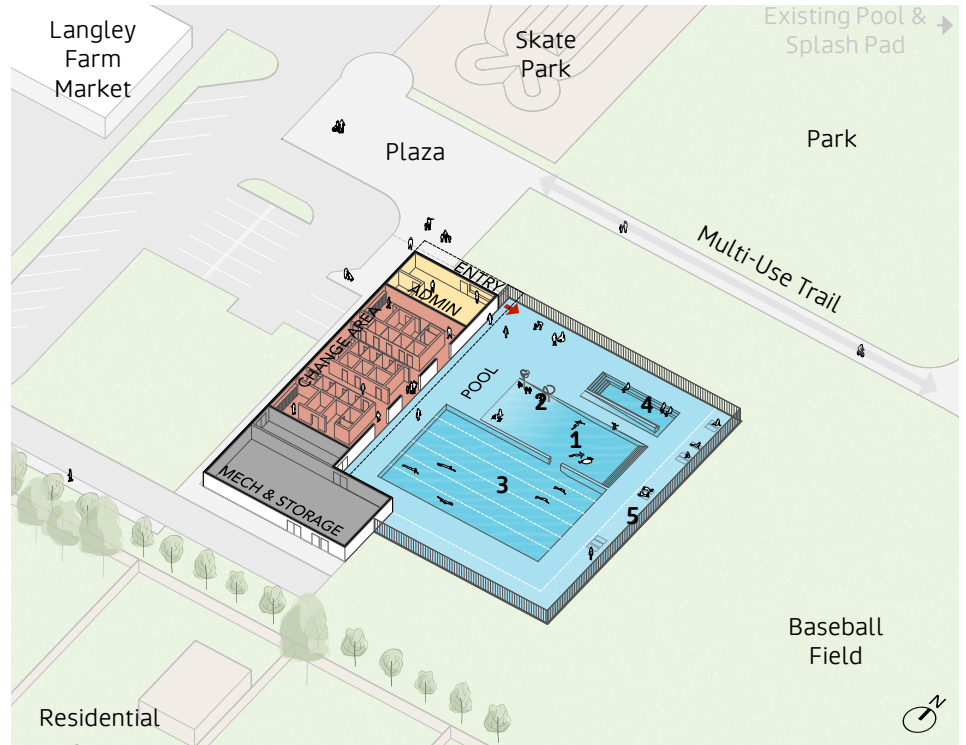
ESTIMATED COSTS

Construction: \$19,084,500

Operation: \$282,700 - 310,970 / yr

Tax Increase: \$138 / yr *

*per average single family home with 30-year amortization period, subject to inflation and interest rate change



OPTION 2 - MEDIUM OUTDOOR POOL

A medium outdoor pool located at the southwest corner of Harris Road Park, featuring a 25 m by 6 lane lap pool, a separate warm-water leisure pool, hot pool, and deck space for lounging. The leisure pool includes a lazy-river, beach-style entry, and fun spray features. This pool would be open for 5 months of the year.

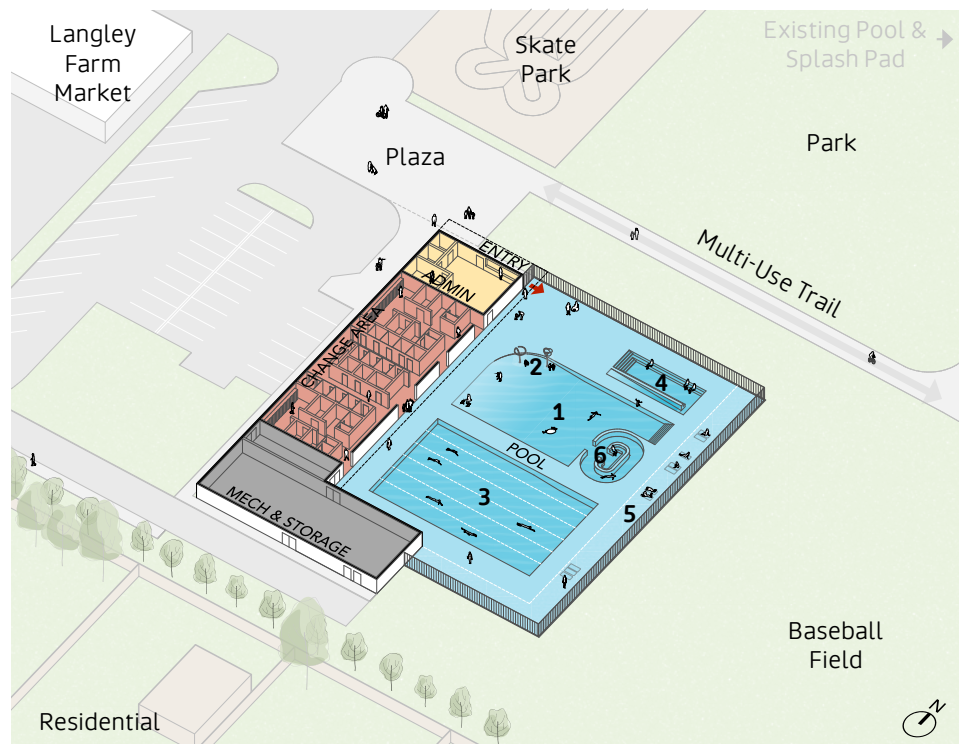
ESTIMATED COSTS

Construction: \$22,370,400

Operation: \$282,700 - 310,970 / yr

Tax Increase: \$157 / yr *

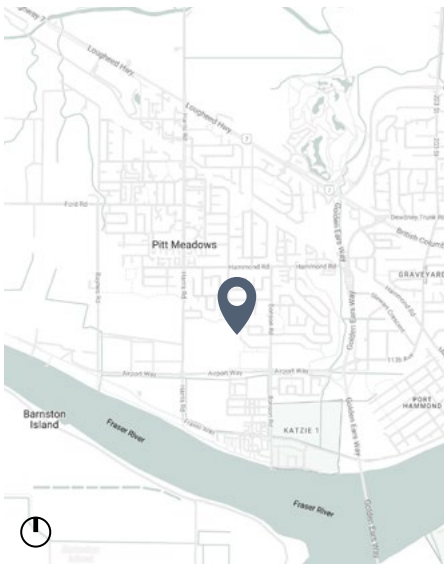
*per average single family home with 30-year amortization period, subject to inflation and interest rate change



INDOOR POOL OPTIONS

SITE

The indoor pool options are sited on the North-West corner of the Pitt Meadows Athletic Park. This keeps the building out of the south end of the park which is mostly green space, and leaves those areas with less impact. The pool would be adjacent to the existing arena, which allows for potential energy recovery options to be investigated in the future as well as allowing for a shared parking lot. It should also be noted that the soil in the area is generally not good for building on, as seen with the arena, which uses piles to support its foundation.



PRIMARY DIFFERENCES

The two indoor options, while similar, have a few key differences. The small indoor pool consists of one tank, which means that the lap and leisure pools will run at the same temperature while in the large option these pools are split allowing for finer control of the temperature to suit both exercise and leisure activities.

While the change rooms were generally only sized during this study, a more detailed design of the building would result in marginally smaller change rooms and mechanical systems for the smaller pool.

The medium pool has one additional feature over the small pool, which is the addition of a lazy river, which expands the features of the pool for the public.

BUILDING AMENITIES

The indoor pool options feature a range of amenities, identified below:

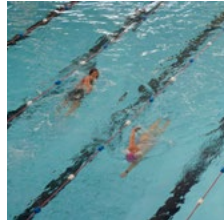
1 Leisure Pool



2 Water Features



3 Lane Pool



4 Hot Pool



5 Steam & Sauna



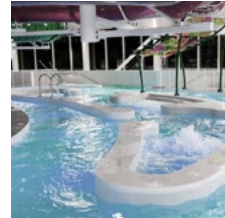
6 Viewing Area



7 Multi-Purpose



8 Lazy River



OPTION 3 - SMALL INDOOR POOL

DESCRIPTION

A small indoor pool located near the arena at Pitt Meadows Athletic Park, with a combined 25 m by 6 lane lap pool and leisure pool, on-deck viewing, steam and sauna rooms. The pool features a beach-style entry and fun spray features. Both indoor options include a multi-purpose room.

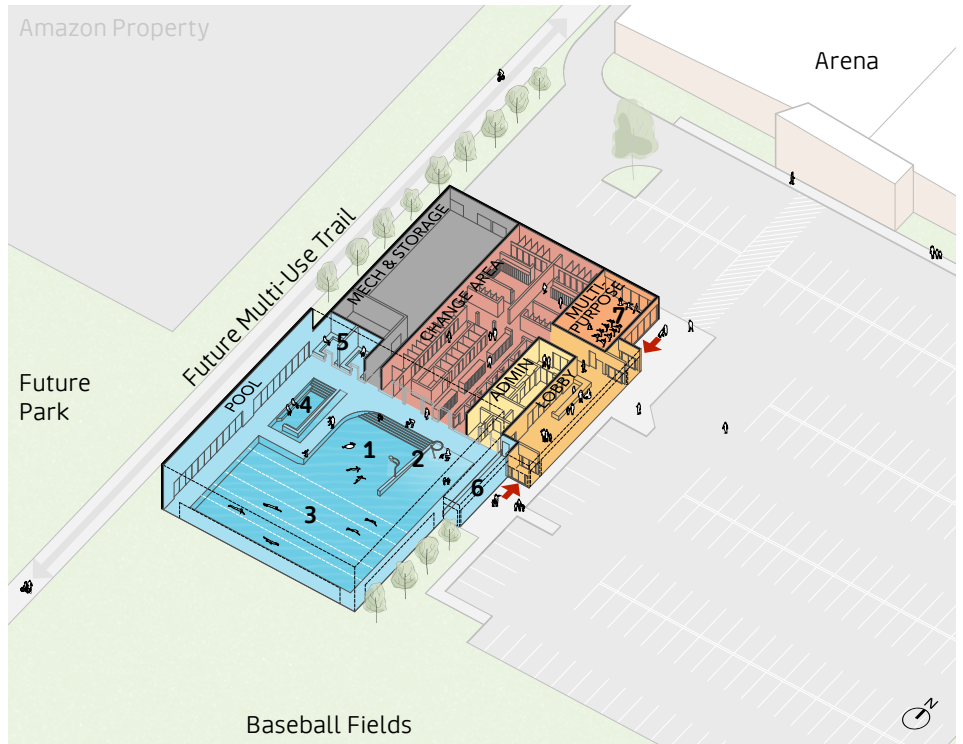
ESTIMATED COSTS

Construction: \$39,074,200

Operation: \$1,837,550 - 2,544,300 / yr

Tax Increase: \$451 / yr *

*per average single family home with 30-year amortization period, subject to inflation and interest rate change



OPTION 4 - MEDIUM INDOOR POOL

DESCRIPTION

A medium indoor pool located near the arena at Pitt Meadows Athletic Park, with a 25 m by 6 lane lap pool, separate warm-water leisure pool, hot pool, on-deck viewing, steam and sauna rooms. The pool features a lazy river, beach-style entry and fun spray features. Both indoor options include a multi-purpose room.

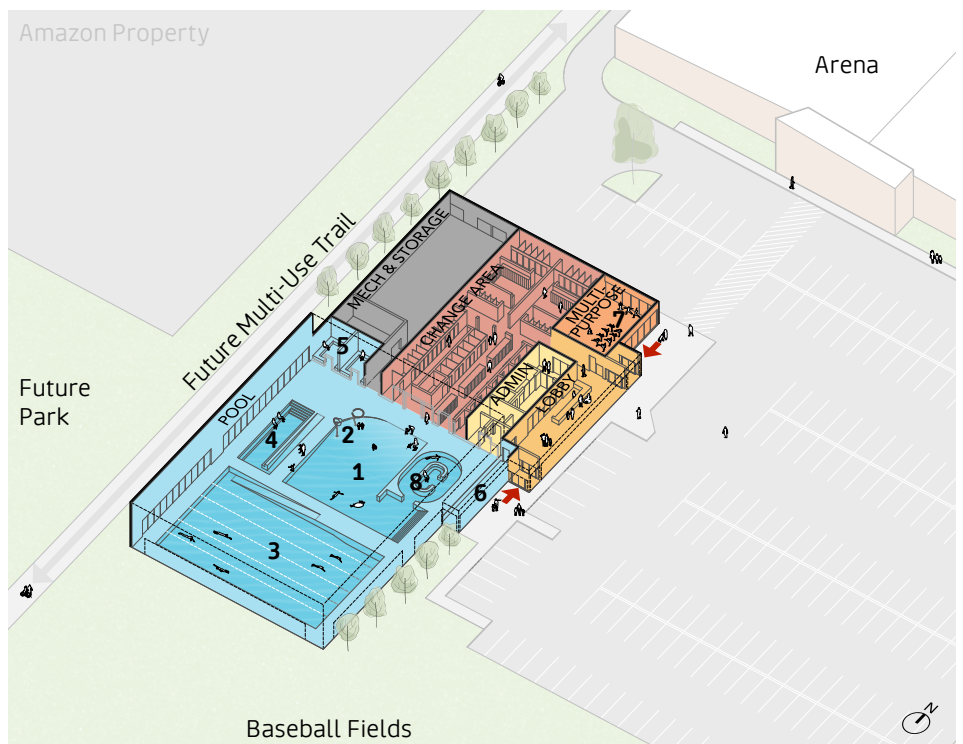
ESTIMATED COSTS

Construction: \$41,731,100

Operation: \$1,837,550 - 2,544,300 / yr

Tax Increase: \$466 / yr *

*per average single family home with 30-year amortization period, subject to inflation and interest rate change





Open House Booth at Pitt Meadows Day

6.0 ENGAGEMENT 2

6.1 OPEN HOUSE BOOTH AT PITT MEADOWS DAY

An open house booth was held at Pitt Meadows Day at Harris Road Park on June 3, 2023 from 11am to 7pm.

The booth provided information on the Aquatics Feasibility Study, concept design options and associated costing. A voting board was provided so visitors could vote for their favourite design option. There were also pool design and colouring activities for children.

Approximately 315 people visited the open house booth over the event.



Key Learnings

- Strong support for a pool in the community, particularly a medium-sized indoor pool
- Interest in hybrid options to extend use of an outdoor pool option into the shoulder season
- Interest in alternate funding opportunities



6.2 PUBLIC SURVEY 2

An online survey was available from June 2 to June 23 2023 via an open access link from the City of Pitt Meadows Have Your Say web portal. Hard copy surveys (trifold brochures) were made available at City Hall and the Pitt Meadows Family Recreation Centre.

The survey included questions about respondent's preferred pool options, which they would be willing to pay for through an increase in property taxes, and preferred locations. The survey required respondent registration.

Refer to Appendix D for a summary of Survey 2 results.



City of Pitt Meadows Aquatics Feasibility Study #1

This survey is now closed, please complete Survey #2 below

Survey Closed



Survey 1 Results Summary

Survey 1 Results Summary.pdf (1.29 MB) (pdf)

Documents

Pool Options (9.59 MB) (pdf)
 Frequently Asked Questions (140 KB) (pdf)

City of Pitt Meadows Aquatics Feasibility Study - Survey #2

The City of Pitt Meadows is continuing to seek feedback for an Aquatics Feasibility Study. Based on public input from Survey 1, four pool options have been prepared for your consideration. Please complete the survey below to let us know which pool option will best support you and our growing Pitt Meadows community. [Summary of Survey 1 results here](#)

Your comments will help us develop final recommended pool options. Please note that this survey is for public opinion gathering purposes only. Decisions about City amenities and spending will be considered by Council and City Staff as part of annual budgeting and business planning.

If you live in a household with multiple individuals, please consider their viewpoints and aquatics needs as best as possible.

[Pool Option Panels \(pdf\)](#)

[You can find a list of frequently asked questions here](#)

<p>OPTION 1 Small Outdoor Pool</p> <p>ESTIMATED COSTS Construction: \$19,084,500 Operation: \$262,700 - \$310,970 / year Tax Increase: \$138 / year (per average single family home)</p>	<p>OPTION 2 Medium Outdoor Pool</p> <p>ESTIMATED COSTS Construction: \$22,370,400 Operation: \$262,700 - \$310,970 / year Tax Increase: \$157 / year (per average single family home)</p>
<p>OPTION 3 Small Indoor Pool</p> <p>ESTIMATED COST Construction: \$39,074,200 Operation: \$1,837,550 - \$2,544,300 / year Tax Increase: \$451 / year (per average single family home)</p>	<p>OPTION 4 Medium Indoor Pool</p> <p>ESTIMATED COST Construction: \$41,731,100 Operation: \$1,837,550 - \$2,544,300 / year Tax Increase: \$466 / year (per average single family home)</p>

Take Survey

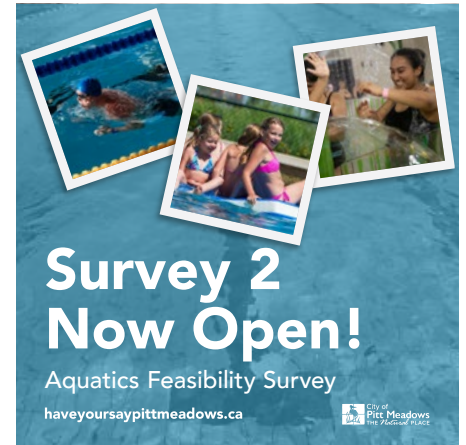


'Have Your Say Pitt Meadows' web survey

6.3 COMMUNICATIONS CAMPAIGN

The survey was promoted through the following channels:

- Newspaper Ad
- Rec Centre TV Screen
- Social Media (6 posts)
- 'Have Your Say' dedicated Website
- Web Spotlight on City website



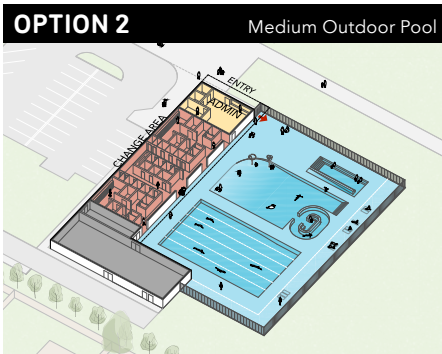
Social media post

7.0 NEXT STEPS

7.1 RECOMMENDATIONS

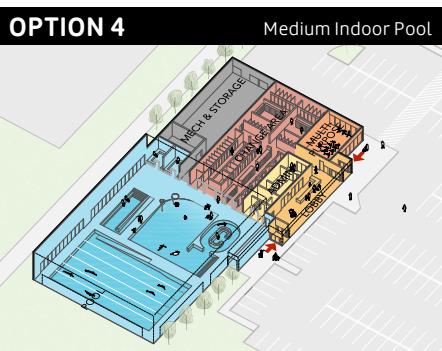
Aquatics opportunities are clearly important to Pitt Meadows residents, as has been validated by previous planning (including the City's 2021 Parks, Recreation, and Culture Master Plan). With the community's current facility, the Harris Road Outdoor Pool, nearing the end of its lifespan there is a clear need to explore the future of aquatics services in Pitt Meadows. While aquatics services are highly beneficial, they come with significant capital and operating costs. The level of aquatics service provided by the City in the future will need to balance the many benefits that aquatics activities and programming offer with taxation/cost impacts and a responsible level of risk. Within the lower mainland context, indoor aquatics facilities are not typically provided by municipalities of a similar size to Pitt Meadows, however many municipalities across the province of a similar size do provide indoor aquatics facilities. Most of these facilities were developed between 1980 – 2000 when cost structures to build and operate pools were significantly different.

A range of indoor and outdoor aquatics facility options were explored, analyzed, and reviewed with the community through two phases of engagement. Should there be a willingness to invest in expanding current aquatics offerings in the community, two recommended concept options have been identified out of the four that were explored through the study. These options include an indoor and outdoor concept to reflect two different levels of aquatics infrastructure investment and their associated cost impacts.



Option 2 - Medium Outdoor Pool

A medium outdoor pool featuring a 25 meter by 6 lane lap pool, leisure pool with beach-style entry, lazy river + family fun features, and hot pool. Located at Harris Road Pool, this pool would be open for 5 months of the year and entails an estimated annual tax increase of \$157/year. Costs are considerably lower than for an indoor pool, however given community desire for year-round pool access, it is suggested that consideration be given to options that would extend the pool's use into the shoulder seasons. One way to extend use into the shoulder seasons would be to add an outdoor roof structure with gas-fired heaters to allow pool use during cold or rainy days, at an added cost of approx \$3,265,000 or an additional \$20 per year for single family household (please note that this number only accounts for capital costs and does not include additional operations cost impacts).



Option 4 - Medium Indoor Pool

A medium indoor pool featuring a 25 meter by 6 lane lap pool, leisure pool with beach-style entry, lazy river + family fun features, a hot pool, steam room, sauna, and a multipurpose room. Located at Pitt Meadows Athletic Park, this option entails an estimated annual tax increase of \$466/year. Costs are substantially higher than for an outdoor pool, however year-round access would be provided for residents, along with additional amenities.

Recommended Design Options

7.2 PARTNERSHIP AND FUNDING CONSIDERATIONS

Four general approaches are used to deliver public aquatics infrastructure in Western Canada. The following table provides a brief synopsis of each.

Approach	Description	Why and when is this approach used?
Municipal Operations	The municipality directly owns and operates the facility.	The most common delivery approach in the lower mainland. Provides the municipality with the ability to directly tailor aquatics service offerings to its resident needs. This approach also tends to be used in multiplex facilities to achieve synergies between different types of amenities.
Contracted Operations	Operations are contracted by the municipality to an operator – typically a private sector entity with experience running recreation facilities.	Cost efficiency is typically the primary rationale behind using this approach. Additionally, contracted operations reduce the need for City staff overhead to support functions like human resources, financial transactions, and facility management. The current Harris Road Outdoor Pool is operated using this approach.
Third Party Partnership	The municipality partners with a public or private sector entity to build and operate the facility.	This approach requires interest from the potential partner and is most often used when the municipality is able to provide land and potential ongoing operational funding, but is not able or interested in actually operated the facility. YMCA facilities (e.g. Bettie Allard YMCA in Coquitlam, Langara and Robert Lee YMCA's in Vancouver, Westhills YMCA-YWCA in Langford) are examples of aquatics facilities provided using this approach.
Regional Partnership	Multiple jurisdictions (municipalities, electoral areas, etc.) jointly fund a facility. Operational responsibility is typically assumed by one of the partners and reflected in the funding model.	This approach is typically the result of multiple jurisdictions determining that a mutually beneficial funding partnership is required to provide the desired level of aquatics or other types of recreation infrastructure. The North Vancouver Recreation and Culture Commission is a current example within the lower mainland. Other past examples include the Pitt Meadows / Maple Ridge and Township of Langley / City of Langley funding partnerships. Across the province there are numerous examples of funding partnerships between regional districts and municipalities.

The decision as to which approach is best to deliver aquatics services requires the trade-offs associated with each to be clearly understood and analyzed. For example:

- Direct municipal operations provide the greatest level of control over programming and space allocation, but also typically the highest operational cost structures.
- A third-party partnership may provide the lowest ongoing operating subsidy, but is likely to reduce municipal control over the how space is programmed, allocated, and made available to the community as the third-party operator will need to generate the necessary revenue to meet targeted profit margins. Additionally, some risk exists if the third-party operator walks away from the facility at any point in time.
- Contracted operations have been used successful and agreements can be tailored to achieve desired municipal outcomes. However, some risk could exist with regards to customer service standards and program quality as the facility is not operated using municipal staff as well as overall operational maintenance level of care.

The development of a capital funding model will be another critical step should the project move forward. A common mistake when establishing a capital funding model for a public recreation project is to overestimate grants and sponsorships opportunities. While these sources should be pursued and could help contribute to the overall capital project costs, the initial funding model for the project needs to be realistic regarding the unpredictability of these funding sources. Unless a community is successful in getting funding through a major federal grant program, it is rare to obtain more than 3 - 5% of a facilities capital cost through non-taxation or borrowing sources.

The Investing in Canada Program was the most significant grant funding program available to major community recreation projects in Canada. This federal program was administered by the province and allocated \$3.917 billion over ten years towards five key areas of infrastructure, including "community, culture and recreation infrastructure". A handful of major recreation facility projects across the province were successful at procuring funding through this program, however competition for these major grant opportunities is significant. The last intake for the program is now closed and it is unclear when another similar program or additional stream of funding will be available. Other examples of smaller grant programs available over the last five years include federal government's Canada Community Revitalization Fund and Province of British Columbia's Growing Communities Fund and Community Recreation Program grant. These grants provided smaller contributions towards approved projects.

The following advice is suggested to best position Pitt Meadows for success in procuring available grants for the potential project:

- Develop a comprehensive business case that builds upon previous work and outlines project benefits and alignment with broader City goals values.
- Reflect alignment with key provincial and national policy directions (green energy, reconciliation and decolonization, inclusion and equality, etc.).
- Ensure community engagement and input is strongly reflected in grant applications.

Sponsorship potential for the potential facility project will be incumbent on two factors:

- Fostering project champions within the business community.
- Showing sponsorship value (e.g. reflecting mutually beneficial outcomes for the City and business).

If the project moves forward, the City should engage the necessary expertise to inventory and price potential sponsorship inventory and develop a comprehensive sponsorship plan.

Lease spaces present another opportunity to drive incremental facility revenues and help offset expenditures. Public sector providers of recreation services across the province have experienced varying levels of success and challenges with lease spaces in facilities. The success of lease spaces is highly dependent on facility traffic. Facilities that are co-located with secondary schools and other high volume use recreation amenities typically have the most success procuring and retaining lease holders, especially food services. Another factor that must be considered is the type of lease holder that is appropriate to include in a public recreation facility. Providers across the province have taken a variety of approaches as it pertains to allowing healthy vs non-healthy food options and types of service offering deemed appropriate (e.g. whether to allow private ventures such as sport academy programs or businesses not affiliated with recreation).

7.3 NEXT STEPS

This study represents a very early stage of design. The concept design work and costing estimates were provided to support key decision-making for future development of this project. If the project moves forward, suggested next steps and project considerations to be addressed during later stages of design would include:

- Integration with facility planning with ongoing land use/masterplan work at both Harris Road Park and Pitt Meadows Athletic Park sites, including Parking and Transportation Planning; and other site investigations.
- Determination of a project budget, funding model(s), and potential capital or operating partnerships.
- The assent of electors, likely via referendum, would likely be required to authorize borrowing for the estimated costs.
- Additional Studies: Legal & topographic survey, geotechnical assessments, environmental assessments, transportation impact assessment (TIA)
- Further consultation with City staff to determine specific space and maintenance requirements, sizing of systems and equipment, and the development of other technical requirements; Energy, Sustainability, and Green House Gas (GHG) Considerations.
- Develop project specific delivery plan, covering major aspects of the project including: Scope, Budget, Schedule, Governance, Risk Management, Design and Construction Approach

The Aquatics Feasibility Study was prepared to provide the City of Pitt Meadows with the necessary information to guide future decision making on the most viable level of future aquatics service. The proposed development options were guided by market context analysis and public input to be programmatically, operationally and economically suitable. The community should continue to be informed and consulted as the project proceeds through the above noted steps, as a continuation of the public engagement momentum initiated through this preliminary work.



**FAULKNERBROWNS
ARCHITECTS**

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Vancouver, BC V6B 2V2

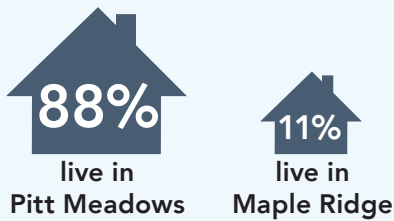
faulknerbrowns.com

Appendix A

What We Heard: Engagement 1 Results

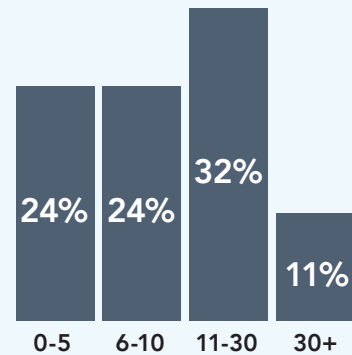
Survey 1 was conducted from April 17 to May 8, 2023 as an open online survey and as printed hard copies made available at City Hall, the Pitt Meadows Family Recreation Centre. Survey 1 received a total of 1,139 responses. A summary of the results is provided below.

Community of Residence



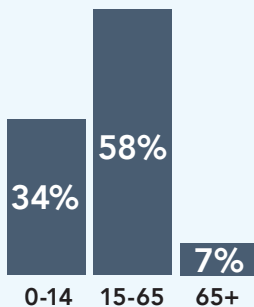
Note: Strong participation from Pitt Meadows residents

Years lived in Pitt Meadows



Note: Strong participation from long-time residents

Age groups



Note: As compared to regional demographics:

- Strong participation by families with children
- Lower participation by seniors

Most important aquatics activities



Least important activities noted:

- Socialization (6%)
- Sports/Competition/Training (15%)
- Therapy/Rehabilitation (6%)

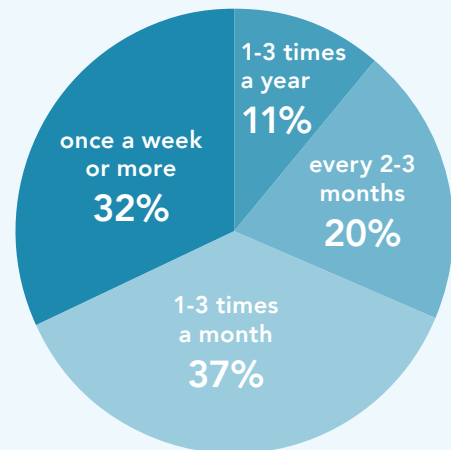
Most-used aquatics facilities in area

- 62%** Maple Ridge Leisure Centre
- 43%** Port Coquitlam Community Centre
- 42%** Walnut Grove Community Centre
- 28%** City Centre Aquatic Complex
- 25%** Harris Road Outdoor Pool




Other regional aquatics facilities noted:

- Hammond Pool
- Poirier Sport and Leisure Complex
- Aldergrove Otter Co-op Outdoor Experience

Frequency of visits to aquatics facilities in area







Top factors influencing which aquatics facilities participants use

-  **84%** Proximity to home
-  **42%** Quality + availability of programming/lessons
-  **40%** Appeal of shallow water aquatics area + features

Additional notable factors:

- Pool size (27%)
- Water temperature (27%)
- Change rooms comfort/convenience (25%)

Most important aquatics opportunities

-  **63%** Family swim times
-  **60%** Swimming lessons
-  **35%** Classes (aquafit etc)
-  **33%** Lane swimming

Other important aquatics opportunities:





- Youth programs (19%)
- Adult programs (15%)

Levels of aquatics services respondents would be willing to pay an increase in property taxes to support

- 66%** Large facility with multiple pools & leisure pool/amenities
- 50%** Small to mid-sized indoor facility with lane pool & leisure pool
- 19%** An enhanced outdoor pool with lane swimming & leisure opportunities
- 13%** Renovate or replace the Harris Road Outdoor Pool with a similar-sized facility

Note: 8% selected 'None of the above'

Top priorities when assessing future aquatics facility options

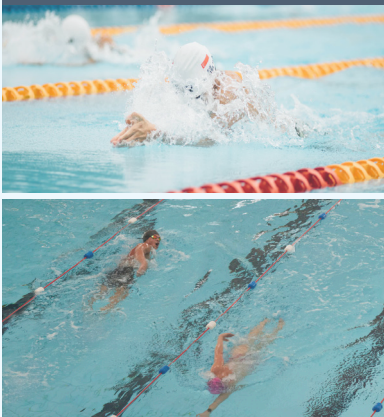
-  **74%** Provides aquatics programs, amenities + opportunities not available in Pitt Meadows
-  **48%** Responds to community demand
-  **40%** Minimizes impact on resident taxes
-  **27%** Potential to generate economic benefit by bringing events and non-local spending to Pitt Meadows

Additional comments:

Swim lesson accessibility/availability; Year-round access.

Most important aquatics amenities for a future pool in Pitt Meadows

Lane Pool (44%)



Beach Entry (33%)



Lazy River (32%)



Fun Features (28%)



Additional noted priorities:

- Steam/Sauna Rooms (25%)
- Waterslides (24%)



City of Pitt Meadows Aquatics Feasibility Study

for the City of Pitt Meadows

concept design options by: FAULKNERBROWNS
ARCHITECTS

Class D Estimate

Feasibility Study Documents Issued: May 16, 2023

James Bush & Associates Ltd

Professional Quantity Surveyors
Construction Cost Managers
Value Analysts

LEED Accredited Professional
Green Building Specialist

3722-197th Street
Langley, BC
V3A 1B3

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✉ jim@jba.bc.ca
🌐 www.jba.bc.ca



May 29, 2023

PROJECT COST SUMMARY	Class D Estimate of Feasibility Options							
	OPTION 1 - Small Outdoor Pool		OPTION 2 - Medium Outdoor Pool		OPTION 3 - Small Indoor Pool		OPTION 4 - Medium Indoor Pool	
	<u>New Building</u> 700m2		<u>New Building</u> 850m2		<u>New Building</u> 2100m2		<u>New Building</u> 2295m2	
	Admin		Admin		Lobby, Admin, Program		Lobby, Admin, Program	
	Change (M/F/Universal)		Change (M/F/Universal)		Change (M/F/Universal)		Change (M/F/Universal)	
	Mech Plant		Mech Plant		Mech Plant		Mech Plant	
	<u>Outdoor Pool</u> m2		<u>Outdoor Pool</u> m2		<u>Indoor Pool</u> m2		<u>Indoor Pool</u> m2	
	Lap Pool 375		Lap Pool 375		Lap Pool 375		Lap Pool 391	
	Leisure Pool 175		Leisure Pool 330		Leisure Pool 220		Leisure Pool 280	
	Hot Tub 59		Hot Tub 59		Hot Tub 51		Hot Tub 59	
BUILDING CONSTRUCTION	\$9,985.14 /m2	\$6,989,600	\$9,728.82 /m2	\$8,269,500	\$9,625.24 /m2	\$20,213,000	\$9,465.88 /m2	\$21,724,200
New Building Construction	700 m2		850 m2		2,100 m2		2,295 m2	
Building Shell Construction	\$5,462.29 /m2	3,823,600	\$5,285.29 /m2	4,492,500	\$6,363.33 /m2	13,363,000	\$6,225.80 /m2	14,288,200
Interior Fitout Construction	\$4,522.86 /m2	3,166,000	\$4,443.53 /m2	3,777,000	\$2,337.62 /m2	4,909,000	\$2,277.56 /m2	5,227,000
Interior POOL Finishing		N/A		N/A	\$924.29 /m2	1,941,000	\$962.53 /m2	2,209,000
OUTDOOR POOL CONSTRUCTION	\$4,613.46 /m2	\$2,809,600	\$1,905.52 /m2	\$3,315,600		\$0		\$0
Outdoor Pool	609 m2	2,809,600	1,740 m2	3,315,600				
SITE DEVELOPMENT		\$1,243,000		\$1,355,000		\$2,219,000		\$2,229,000
Site Development, Paving, Parking, Hard/Soft Landscape		681,000		769,000		1,367,000		1,375,000
Mechanical Civil Services (storm, sewer, water & gas)		167,000		167,000		167,000		167,000
Electrical Civil Services		135,000		135,000		220,000		220,000
GC Overheads, Fee and Design Contingency		260,000		284,000		465,000		467,000
OFFSITE WORK		\$0		\$0		\$0		\$0
SUB-TOTAL CONSTRUCTION (Excluding GST)	May 2023 \$	\$11,042,200	May 2023 \$	\$12,940,100	May 2023 \$	\$22,432,000	May 2023 \$	\$23,953,200
Construction Escalation (to Q2 2026 Construction Start)	23.2%	\$2,560,300	23.2%	\$3,000,300	23.2%	\$5,201,200	23.2%	\$5,553,900
Professional Design Fees & Expenses	10.0%	\$1,104,000	10.0%	\$1,294,000	10.0%	\$2,243,000	10.0%	\$2,395,000
Project Management	3.5%	\$386,000	3.5%	\$453,000	3.5%	\$785,000	3.5%	\$838,000
Furniture, Furnishings & Equipment)	5.0%	\$349,000	5.0%	\$413,000	5.0%	\$1,011,000	5.0%	\$1,086,000
Project Contingency (incl Change Orders)	20.0%	\$2,208,000	20.0%	\$2,588,000	20.0%	\$4,486,000	20.0%	\$4,791,000
Permits, Insurance, Project Administration	3.0%	\$331,000	3.0%	\$388,000	3.0%	\$673,000	3.0%	\$719,000
Goods & Services Tax (fully rebated)	0.0%	\$0	0.0%	\$0	0.0%	\$0	0.0%	\$0
PROJECT RESERVE	10.0%	\$1,104,000	10.0%	\$1,294,000	10.0%	\$2,243,000	10.0%	\$2,395,000
TOTAL PROJECT COST (Including Payable GST)	JUNE 2026 \$	\$19,084,500	JUNE 2026 \$	\$22,370,400	JUNE 2026 \$	\$39,074,200	JUNE 2026 \$	\$41,731,100

SEPARATE PRICES (Project Costs, Incl. Soft Costs, Escal)			
1 COVERED LONGSPAN POOL STRUCTURE	n/a	520 m2	\$3,265,000

NOTES & CLARIFICATIONS

This estimate is based on a lump sum, competitively bid form of contract, which would include a Construction Managed procurement method, where all aspects of the project are openly competitively bid.

The estimate is priced in MAY 2023 dollars, with an allowance for Escalation to start of construction, expected to be 2nd Quarter 2026 (June 2026). Escalation has been calculated using the current yearly rate projections of 10% for remainder of 2023, 7.5% for 2024, 5% for 2025, and 3.5% for 2026. The calculated rate for Q2 2026 (June 2026) is 23.2%

The construction market recovery situation with Labour shortages, Supply Chain issues, Bankruptcies, Fuel pricing, Interest Rates etc, continue to impact construction pricing and are expected to continue to do so for the next several years. There is the hope that construction escalation will eventually return to some sense of normality.

This estimate represents a fair and reasonable construction cost of the work based on an understanding of the work as outlined on the CONCEPT DESIGN & PROJECT PLANNING report by FAULKNER BROWNS ARCHITECTS, dated MAY 16, 2023. As detailed site investigation has not been undertaken by Engineering professionals nor detailed building design available, this estimate is classified as a CLASS D Estimate with an expectation of accuracy of around +/-20% to 25%. A class D Estimate is best used as a comparative tool when analyzing options to be explored and developed further at the Concept Design Stage.

The estimate prepared by JBA reflects probable construction costs prevailing at the date of this report and is a determination of fair market value for the construction of this project and should not be taken as a prediction of the lowest bid price. JBA does not have control over the cost of labour, materials, equipment, over a contractor's method of determining bid prices, or over competitive bidding, market conditions. Accordingly JBA cannot and does not warrant or represent that bid prices will not vary from this estimate.

City of Pitt Meadows

May 29, 2023

Aquatics Feasibility Study

for the City of Pitt Meadows

concept design options by: FAULKNERBROWNS ARCHITECTS

PROJECT COST SUMMARY			OPTION 1 - Small Outdoor Pool	
NEW BUILDING CONSTRUCTION	700 m2	\$9,985.14		\$6,989,600
NEW BUILDING - Admin, Change, Mechanical Equip	700 m2	\$9,985.14		\$6,989,600
Building Shell (see attached estimate)	700 m2	\$5,462.29	3,823,600	
Non-Combustible Construction 3.9m (Single Storey)	700 m2			
Fit Out/Interior construction	700.0 m2	\$2,665.71	1,866,000	
Admin	69.5 m2	\$2,157.00	150,000	
Unit Washroom	8.5 m2	\$6,695.00	57,000	
Men's Change	42.8 m2	\$3,717.00	159,000	
Men's Shower (1 large)	6.8 m2	\$4,883.00	209,000	
Men's Washroom (2WC)	12.4 m2	\$7,694.00	95,000	
Universal Change, Circ, Janitor (12 Shower Cubicle)	143.9 m2	\$2,664.00	383,000	
Universal Washroom (7WC)	33.6 m2	\$7,289.00	245,000	
Women's Change	42.8 m2	\$3,717.00	159,000	
Women's Shower (1 large)	6.8 m2	\$6,917.00	47,000	
Women's Washroom (2WC)	12.4 m2	\$7,694.00	95,000	
Storage	43.5 m2	\$1,150.00	50,000	
Mechanical Equipment	206.5 m2	\$1,049.00	217,000	
Wall thickness	70.5 m2			
Mechanical - Water Treatment (incl. filter, pumps etc.)			1,300,000	
OUTDOOR POOL CONSTRUCTION	1,492 m2	\$1,883.11		\$2,809,600
Outdoor Pool	1,492 m2	\$1,883.11		\$2,809,600
Lap Pool (6 x 25m lanes)	1m to 1.35m	375.0 m2		
Leisure Pool	0m to .9m	175.0 m2		
Hot Pool	.9m	59.0 m2		
Pool Deck		883.0 m2		
Outdoor Pool Construction	1,492 m2			
Earthworks - foundations and pool tank	948.9 m3	\$200.00	190,000	
Pool Walls 0m to 900mm	115.0 m	\$1,800.00	207,000	
Pool Walls 1000m to 1350mm	80 m	\$2,340.00	187,000	
Step seating	87 m	\$1,200.00	104,000	
Pool Tank Bottom incl. ramp/slopes	609 m2	\$425.00	259,000	
Concrete deck	883 m2	\$285.00	252,000	
Wood Decking	270 m2	\$425.00	115,000	
Pool Specialties - SS Railings, sockets			50,000	
Painting/parge finish - inside pool	1,200 m2	\$380.00	456,000	
Pool Edge, Skimmer/trench drains etc	159 m	\$450.00	72,000	
Pool Specialty Features - Sprays		Item	50,000	
Pool Drainage & Buried Piping to Mech Room		Item	75,000	
Pool Lighting		Item	50,000	
8ft Perimeter flat bar steel picket fence	108 m	\$1,148.35	124,000	
Gates	1 Pair	Item	5,000	
Signage		Item	25,000	
GC Overheads/Fee			333,200	
Design Contingency			255,400	

City of Pitt Meadows

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Aquatics Feasibility Study

for the City of Pitt Meadows

concept design options by: FAULKNERBROWNS ARCHITECTS

PROJECT COST SUMMARY			OPTION 1 - Small Outdoor Pool	
SITE DEVELOPMENT			\$1,243,000	
<u>Site Development, Paving, Parking, Hard/Soft Landscape</u>				
Site clearing & Preparation, remove paving, grass, fxt	2,095 m2	\$25.00		52,000
Existing Services - Relocations, Abandon				50,000
Roads - Asphalt Paving & Curbs	345 M2	\$275.00		95,000
Sidewalks and Decorative Paving	400 m2	\$285.00		114,000
New Parking	650 m2	\$230.00		150,000
Hard landscaping, planters, steps, features, signage				120,000
Soft Landscaping / Planting				100,000
<u>Mechanical Civil Services (storm, sewer, water & gas)</u>				
• Water Main - new 150mm dia				65,000
• Storm drainage				60,000
• Sanitary Connection - remain				30,000
• Gas				12,000
<u>Electrical Civil Services</u>				
• Hydro Charge for new 347/600v Service				50,000
• Incoming Underground Service Ducts/Telus/Cable, Conc Tranf Pad				35,000
• Site Lighting				50,000
General Contractor Overheads & Fee				147,000
Design Contingency				113,000
OFFSITE WORK			\$0	
<u>Roads & Intersections</u>				
Services Upgrades				
SUB-TOTAL CONSTRUCTION (Excluding GST)			May 2023 \$	\$11,042,200
Construction Escalation (to Q2 2026 Construction Start)			23.2%	\$2,560,300
Professional Design Fees & Expenses			10.0%	\$1,104,000
Project Management			3.5%	\$386,000
Furniture & Furnishings & Equipment			5.0%	\$349,000
Project Contingency (incl Change Orders)			20.0%	\$2,208,000
Permits, Insurance, Project Administration, Legal Fees etc			3.0%	\$331,000
Goods & Services Tax (fully rebated)				\$0
PROJECT RESERVE			10.0%	\$1,104,000
TOTAL PROJECT COST (Including Payable GST)			JUNE 2026 \$	\$19,084,500

CLASS D COST ESTIMATE		OPTION 1 - Small Outdoor Pool			
		GROSS FLOOR AREAS			
		Basement		0.0 m2	
		Main Level - Change Room, Admin, Mechanical		700.0 m2	
		TOTAL GROSS FLOOR AREA		700.0 m2	
		BUILDING STATISTICS			
		Existing Building Demolition			
		Footprint (Slab On grade)		700.0 m2	
		Suspended Floor Structure		0.0 m2	
		Roof Structure		828.0 m2	
		Exterior Wall - Solid		504.7 m2	
		Exterior Glazing		25.7 m2	
		Canopies, Roof Overhang		128.0 m2	
Element	Element Cost			Sub-total	Total Cost
	Quantity	Unit Rate			
1. SUBSTRUCTURE					431,500
(a) Foundations	700 m2	407.14		285,000	
• Perimeter foundations - strip	136 m	810.00	110,200		
• Perimeter foundations - strip - interior	60 m	364.50	21,900		
• Column foundations/Brace Bay			0		
• Foundation walls	196 m	780.00	152,900		
(b) Earthworks	700 m2	209.29		146,500	
• Site prep, clearing	863 m2	40.00	34,500		
• Excavate to rough grade -400mm below slab, dispose offsite	345 m3	185.00	63,900		
• Imported granular, backfill, slab base - placed	241 m3	90.00	21,700		
• Erosion and Sedimentation Control (ESC)			26,400		
2. STRUCTURE					810,000
(a) Slab on Grade	700 m2	245.00		171,500	
• Concrete slab on grade	700 m2	245.00	171,500		
(b) Upper floor Structure				0	
(c) Structural Walls				95,500	
• Demising walls (structural)	281 m2	340.00	95,500		
(d) Roof construction	828 m2	655.80		543,000	
• Roof structure, incl. brace bays, columns etc	828 m2	600.00	496,800		
• Perimeter 900mm deep fascia, parapet cant/upstand	142 m	325.00	46,200		
3. EXTERIOR CLADDING					1,270,500
(a) Roof finish	828 m2	564.25		467,200	
• SBS Membrane Flat	828 m2	415.00	343,600		
• Lightwell/Skylights			0		
• Metal Flashing - Parapet	142 m	800.00	113,600		
• Mech equip curbs, vents, fans etc.		Item	10,000		
(b) Walls below ground floor	122 m2	184.64		22,600	
• Waterproofing	122 m2	185.00	22,600		
(c) Exterior Wall Construction above grade	505 m2	1,217.31		614,400	
<u>Exterior Wall Construction</u>					
• stud framing and sheathing	505 m2	250.00	126,200		
• stud framing and sheathing - high walls	0 m2	400.00	0		
• Peel n stick air/VB, 125mm Insulation	505 m2	130.00	65,600		
• Drywall on interior	355 m2	65.00	23,100		
• Drywall on interior hi impact/WP	150 m2	140.00	21,000		
<u>Exterior Finishes</u>					
• Masonry exterior	505 m2	750.00	378,500		
(d) Windows	26 m2	1,923.68		49,400	
• Glazing, clerestory	20 m2	1,750.00	34,400		
• Glazing, Entry incl. wicket opening	6 m2	2,500.00	15,000		
(e) Exterior doors & screens	11 No.	7,309.09		80,400	
• H/M Door and Frame	3 No.	2,800.00	8,400		
• H/M Door and Frame - double	4 Pair	5,500.00	22,000		
• Large sliding gate/door, insulated, decorative	3 No.	15,000.00	45,000		
• Automatic Operators		Item	5,000		

CLASS D COST ESTIMATE		OPTION 1 - Small Outdoor Pool		
(f) Canopies	128 m2			36,500
• Canopy Structure/Roof Finish			See Above	
• Soffit finishes	128 m2	285.00		36,500
(g) Roof Balconies				0
(h) Sunshades				0
4. INTERIOR PARTITIONS				Fit Out
(a) Permanent partitions				Fit Out
(b) Glazed Interior Windows & Sidelights				Fit Out
(c) Interior Doors, frames, Hardware				Fit Out
5. VERTICAL MOVEMENT				0
(a) Stairs (includes finishes & guardrails)				0
(b) Elevator				0
6. INTERIOR FINISHES				0
7. FITTINGS & EQUIPMENT				0
8. ELECTRICAL - SHELL INFRASTRUCTURE	700 m2	152.00		106,400
(a) Distribution	700 m2	65.00		45,500
(b) Lighting	700 m2	15.00		10,500
(c) Power	700 m2	6.00		4,200
(d) Fire Alarm	700 m2	21.00		14,700
(e) Telephone, Data & communications	700 m2	15.00		10,500
(f) Security	700 m2	30.00		21,000
(g) Public Address, AV	700 m2			0
9. MECHANICAL	700 m2	572.14		400,500
(a) Plumbing & drainage, gas piping, roof drains	700 m2	327.14		229,000
• Plumbing Equipment - Water Entry/PRV/BFP etc		Item	200,000	
• Plumbing fixtures - incl. all pipework, DCW/DHW			See Fit Out	
• Footing Drains	0 m	300.00	0	
• Roof drainage	828 m2	35.00	29,000	
(b) Fire protection - sprinklers main distribution	700 m2	25.00		17,500
(c) HVAC	700 m2	200.00		140,000
• Mech Plant/Equipment	700 m2	200.00	140,000	
(d) Controls	700 m2	20.00		14,000
DIRECT SITE OVERHEADS & SUPERVISION			11.5%	347,200
GENERAL CONTRACTOR or CONSTRUCTION MANAGEMENT FEE			3.5%	118,000
DESIGN CONTINGENCY			10.0%	339,500
TOTAL NEW BUILDING SHELL CONSTRUCTION COST (Excluding GST)				\$3,823,600
GROSS FLOOR AREA: (New)	700 m2			\$5,462.29 /m2

City of Pitt Meadows

Aquatics Feasibility Study

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concept design options by: FAULKNERBROWNS ARCHITECTS

PROJECT COST SUMMARY			OPTION 2 - Medium Outdoor Pool
NEW BUILDING CONSTRUCTION	850 m2	\$9,728.82	\$8,269,500
NEW BUILDING - Admin, Change, Mechanical Equip	850 m2	\$9,728.82	\$8,269,500
Building Shell (see attached estimate)	850 m2	\$5,285.29	4,492,500
Non-Combustible Construction 3.9m (Single Storey)	850 m2		
Fit Out/Interior construction	850.0 m2	\$2,678.82	2,277,000
Admin	88.0 m2	\$1,996.00	176,000
Unit Washroom, Shower	12.2 m2	\$6,935.00	85,000
Men's Change	64.0 m2	\$3,268.00	209,000
Men's Shower (2 large)	14.4 m2	\$4,883.00	209,000
Men's Washroom (4WC)	28.0 m2	\$6,494.00	182,000
Universal Change, Circ, Janitor (12 Shower Cubicle)	143.9 m2	\$2,664.00	383,000
Universal Washroom (7WC)	33.6 m2	\$7,289.00	245,000
Women's Change	64.0 m2	\$3,268.00	209,000
Women's Shower (2 large)	14.4 m2	\$6,485.00	93,000
Women's Washroom (4WC)	28.0 m2	\$6,494.00	182,000
Storage	43.5 m2	\$1,150.00	50,000
Mechanical Equipment	245.0 m2	\$1,038.00	254,000
Wall thickness	71.0 m2		
Mechanical - Water Treatment (incl. filter, pumps etc.)			1,500,000
OUTDOOR POOL CONSTRUCTION	1,740 m2	\$1,905.52	\$3,315,600
Outdoor Pool	1,740 m2	\$1,905.52	\$3,315,600
Lap Pool (6 x 25m lanes)	1m to 1.35m	375.0 m2	
Leisure Pool / Lazy River	0m to .9m	330.0 m2	
Hot Pool	.9m	59.0 m2	
Pool Deck		976.0 m2	
Outdoor Pool Construction	1,740 m2		
Earthworks - foundations and pool tank	1,131.8 m3	\$200.00	226,000
Pool Walls 0m to 900mm	175.0 m	\$1,800.00	315,000
Pool Walls 1000m to 1350mm	80 m	\$2,340.00	187,000
Step seating	87 m	\$1,200.00	104,000
Pool Tank Bottom incl. ramp/slopes	764 m2	\$425.00	325,000
Concrete deck	976 m2	\$285.00	278,000
Wood Decking	275 m2	\$425.00	117,000
Pool Specialties - SS Railings, sockets			50,000
Painting/parge finish - inside pool	1,443 m2	\$380.00	548,000
Pool Edge, Skimmer/trench drains etc	255 m	\$450.00	115,000
Pool Drainage & Buried Piping to Mech Room		Item	100,000
Pool Lighting		Item	50,000
Pool Specialty Features - Sprays		Item	50,000
8ft Perimeter flat bar steel picket fence	110 m	\$1,148.35	126,000
Gates	1 Pair	Item	5,000
Signage		Item	25,000
GC Overheads/Fee			393,200
Design Contingency			301,400

City of Pitt Meadows

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Aquatics Feasibility Study

for the City of Pitt Meadows

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PROJECT COST SUMMARY			OPTION 2 - Medium Outdoor Pool	
SITE DEVELOPMENT			\$1,355,000	
<u>Site Development, Paving, Parking, Hard/Soft Landscape</u>				
Site clearing & Preparation, remove paving, grass, fxt	2,570 m2	\$25.00		64,000
Existing Services - Relocations, Abandon				50,000
Roads - Asphalt Paving & Curbs	345 M2	\$275.00		95,000
Sidewalks and Decorative Paving	425 m2	\$285.00		121,000
New Parking	950 m2	\$230.00		219,000
Hard landscaping, planters, steps, features, signage				120,000
Soft Landscaping / Planting				100,000
<u>Mechanical Civil Services (storm, sewer, water & gas)</u>				
• Water Main - new 150mm dia				65,000
• Storm drainage				60,000
• Sanitary Connection - remain				30,000
• Gas				12,000
<u>Electrical Civil Services</u>				
• Hydro Charge for new 347/600v Service				50,000
• Incoming Underground Service Ducts/Telus/Cable, Conc Tranf Pad				35,000
• Site Lighting				50,000
General Contractor Overheads & Fee				161,000
Design Contingency				123,000
OFFSITE WORK			\$0	
<u>Roads & Intersections</u>				
Services Upgrades				
SUB-TOTAL CONSTRUCTION (Excluding GST)			May 2023 \$	\$12,940,100
Construction Escalation (to Q2 2026 Construction Start)			23.2%	\$3,000,300
Professional Design Fees & Expenses			10.0%	\$1,294,000
Project Management			3.5%	\$453,000
Furniture & Furnishings & Equipment			5.0%	\$413,000
Project Contingency (incl Change Orders)			20.0%	\$2,588,000
Permits, Insurance, Project Administration, Legal Fees etc			3.0%	\$388,000
Goods & Services Tax (fully rebated)				\$0
PROJECT RESERVE			10.0%	\$1,294,000
TOTAL PROJECT COST (Including Payable GST)			JUNE 2026 \$	\$22,370,400

SEPARATE PRICES - Project Costs (Construction & Soft Costs, Excl. Escalation)		
1 COVERED LONGSPAN POOL STRUCTURE	520 m2	\$2,467,000

CLASS D COST ESTIMATE		OPTION 2 - Medium Outdoor Pool			
		GROSS FLOOR AREAS			
		Basement		0.0 m2	
		Main Level - Change Room, Admin, Mechanical		850.0 m2	
		TOTAL GROSS FLOOR AREA		850.0 m2	
		BUILDING STATISTICS			
		Existing Building Demolition			
		Footprint (Slab On grade)		850.0 m2	
		Suspended Floor Structure		0.0 m2	
		Roof Structure		998.0 m2	
		Exterior Wall - Solid		598.1 m2	
		Exterior Glazing		33.7 m2	
		Canopies, Roof Overhang		148.0 m2	
Element	Element Cost				
	Quantity	Unit Rate	Sub-total	Total Cost	
1. SUBSTRUCTURE				505,200	
(a) Foundations	850 m2	383.88	326,300		
• Perimeter foundations - strip	162 m	810.00	131,200		
• Perimeter foundations - strip - interior	60 m	364.50	21,900		
• Column foundations/Brace Bay			0		
• Foundation walls	222 m	780.00	173,200		
(b) Earthworks	850 m2	210.47	178,900		
• Site prep, clearing	1,044 m2	40.00	41,800		
• Excavate to rough grade -400mm below slab, dispose offsite	418 m3	185.00	77,300		
• Imported granular, backfill, slab base - placed	290 m3	95.00	27,500		
• Erosion and Sedimentation Control (ESC)			32,300		
2. STRUCTURE				970,400	
(a) Slab on Grade	850 m2	245.06	208,300		
• Concrete slab on grade	850 m2	245.00	208,300		
(b) Upper floor Structure			0		
(c) Structural Walls			108,700		
• Demising walls (structural)	320 m2	340.00	108,700		
(d) Roof construction	998 m2	654.71	653,400		
• Roof structure, incl. brace bays, columns etc	998 m2	600.00	598,800		
• Perimeter 900mm deep fascia, parapet cant/upstand	168 m	325.00	54,600		
3. EXTERIOR CLADDING				1,497,600	
(a) Roof finish	998 m2	559.72	558,600		
• SBS Membrane Flat	998 m2	415.00	414,200		
• Lightwell/Skylights			0		
• Metal Flashing - Parapet	168 m	800.00	134,400		
• Mech equip curbs, vents, fans etc.		Item	10,000		
(b) Walls below ground floor	146 m2	185.19	27,000		
• Waterproofing	146 m2	185.00	27,000		
(c) Exterior Wall Construction above grade	598 m2	1,213.80	726,000		
<u>Exterior Wall Construction</u>					
• stud framing and sheathing	598 m2	250.00	149,500		
• stud framing and sheathing - high walls	0 m2	400.00	0		
• Peel n stick air/VB, 125mm Insulation	598 m2	130.00	77,800		
• Drywall on interior	448 m2	65.00	29,100		
• Drywall on interior hi impact/WP	150 m2	140.00	21,000		
<u>Exterior Finishes</u>					
• Masonry exterior	598 m2	750.00	448,600		
(d) Windows	34 m2	1,882.42	63,400		
• Glazing, clerestory	28 m2	1,750.00	48,400		
• Glazing, Entry incl. wicket opening	6 m2	2,500.00	15,000		
(e) Exterior doors & screens	11 No.	7,309.09	80,400		
• H/M Door and Frame	3 No.	2,800.00	8,400		
• H/M Door and Frame - double	4 Pair	5,500.00	22,000		
• Large sliding gate/door, insulated, decorative	3 No.	15,000.00	45,000		
• Automatic Operators		Item	5,000		

CLASS D COST ESTIMATE		OPTION 2 - Medium Outdoor Pool		
(f) Canopies	148 m2			42,200
• Canopy Structure/Roof Finish			See Above	
• Soffit finishes	148 m2	285.00		42,200
(g) Roof Balconies				0
(h) Sunshades				0
4. INTERIOR PARTITIONS				Fit Out
(a) Permanent partitions				Fit Out
(b) Glazed Interior Windows & Sidelights				Fit Out
(c) Interior Doors, frames, Hardware				Fit Out
5. VERTICAL MOVEMENT				0
(a) Stairs (includes finishes & guardrails)				0
(b) Elevator				0
6. INTERIOR FINISHES				0
7. FITTINGS & EQUIPMENT				0
8. ELECTRICAL - SHELL INFRASTRUCTURE	850 m2	152.24		129,400
(a) Distribution	850 m2	65.00		55,300
(b) Lighting	850 m2	15.00		12,800
(c) Power	850 m2	6.00		5,100
(d) Fire Alarm	850 m2	21.00		17,900
(e) Telephone, Data & communications	850 m2	15.00		12,800
(f) Security	850 m2	30.00		25,500
(g) Public Address, AV	850 m2			0
9. MECHANICAL	850 m2	521.41		443,200
(a) Plumbing & drainage, gas piping, roof drains	850 m2	276.35		234,900
• Plumbing Equipment - Water Entry/PRV/BFP etc		Item	200,000	
• Plumbing fixtures - incl. all pipework, DCW/DHW			See Fit Out	
• Footing Drains	0 m	300.00	0	
• Roof drainage	998 m2	35.00	34,900	
(b) Fire protection - sprinklers main distribution	850 m2	25.00		21,300
(c) HVAC	850 m2	200.00		170,000
• Mech Plant/Equipment	850 m2	200.00	170,000	
(d) Controls	850 m2	20.00		17,000
DIRECT SITE OVERHEADS & SUPERVISION			11.5%	407,800
GENERAL CONTRACTOR or CONSTRUCTION MANAGEMENT FEE			3.5%	138,600
DESIGN CONTINGENCY			10.0%	400,300
TOTAL NEW BUILDING SHELL CONSTRUCTION COST (Excluding GST)				\$4,492,500
GROSS FLOOR AREA: (New)	850 m2			\$5,285.29 /m2

City of Pitt Meadows

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Aquatics Feasibility Study

for the City of Pitt Meadows

concept design options by: FAULKNERBROWNS ARCHITECTS

PROJECT COST SUMMARY			OPTION 3 - Small Indoor Pool
NEW BUILDING CONSTRUCTION	2,100 m2	\$9,625.24	\$20,213,000
NEW INDOOR POOL BUILDING	2,100 m2	\$9,625.24	\$20,213,000
Building Shell (see attached estimate)	2,100 m2	\$6,363.33	13,363,000
Non-Combustible Construction 4.2m-8.5m (Single Storey)	2,100 m2		
Indoor Pool Statistics	646 m2		
Lap Pool (6 x 25m lanes)	1m to 1.35m	375.0 m2	
Leisure Pool / Lazy River	0m to .9m	220.0 m2	
Hot Pool	.9m	51.0 m2	
Fit Out/Interior construction	2,100.0 m2	\$2,337.62	4,909,000
Lobby, Reception	137.0 m2	\$2,537.00	348,000
Admin, Staff Meeting	40.0 m2	\$2,813.00	113,000
Unit Washroom (2No, 1 Shower)	16.0 m2	\$6,701.00	107,000
Guard Rm, First Aid	17.0 m2	\$3,834.00	65,000
Program Room	86.0 m2	\$2,227.00	192,000
Men's Change	32.0 m2	\$4,904.00	157,000
Men's Shower (5 Shower)	12.0 m2	\$4,883.00	209,000
Men's Washroom (6WC)	29.0 m2	\$6,845.00	199,000
Universal Change, Circ	144.0 m2	\$3,379.00	487,000
Universal Shower (8 Shower)	44.0 m2	\$3,686.00	162,000
Universal Washroom (12WC)	57.0 m2	\$6,616.00	377,000
Women's Change	32.0 m2	\$4,904.00	157,000
Women's Shower (5 Shower)	12.0 m2	\$7,889.00	95,000
Women's Washroom (4WC)	19.0 m2	\$9,584.00	182,000
Mechanical Equipment	239.0 m2	\$1,040.00	249,000
Storage	34.0 m2	\$1,158.00	39,000
Sauna/Steam	32.0 m2	\$5,670.00	181,000
Natorium (excl pool level)	972.0 m2	\$1,636.00	1,590,000
Wall thickness	146.0 m2		
Indoor Pool Finishing			641,000
Painting/parge finish - inside pool	836.3 m2	\$410.00	343,000
Pool Deck, Viewing	326.0 m2	\$325.00	106,000
Pool Edge, Skimmer/trench drains etc	149.0 m	\$450.00	67,000
Pool Specialties, SS Guardrails			75,000
Pool Features - Sprays			50,000
Mechanical - Water Treatment (incl. filter, pumps etc.)			1,300,000
OUTDOOR POOL CONSTRUCTION			\$0

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PROJECT COST SUMMARY			OPTION 3 - Small Indoor Pool		
SITE DEVELOPMENT			\$2,219,000		
<u>Site Development, Paving, Parking, Hard/Soft Landscape</u>					
Site clearing & Preparation, remove paving, grass, fxt	5,400 m2	\$40.00		216,000	
Existing Services - Relocations, Abandon					
Roads - Asphalt Paving & Curbs	Repaint over extg	170 M2	\$70.00	12,000	
Sidewalks and Decorative Paving		350 m2	\$285.00	100,000	
New Parking		2,780 m2	\$230.00	639,000	
Remedial work to existing parking, restripe etc				Item	50,000
Hard landscaping, planters, steps, features, signage					
Soft Landscaping / Planting					
<u>Mechanical Civil Services (storm, sewer, water & gas)</u>					
• Water Main - new 150mm dia				65,000	
• Storm drainage				60,000	
• Sanitary Connection				30,000	
• Gas				12,000	
<u>Electrical Civil Services</u>					
• Hydro Charge for new 347/600v Service				100,000	
• Incoming Underground Service Ducts/Telus/Cable, Conc Tranf Pad				45,000	
• Site Lighting				75,000	
<u>General Contractor Overheads & Fee</u>				263,000	
<u>Design Contingency</u>				202,000	
OFFSITE WORK			\$0		
<u>Roads & Intersections</u>			No work		
<u>Services Upgrades</u>			No work		
SUB-TOTAL CONSTRUCTION (Excluding GST)			May 2023 \$	\$22,432,000	
Construction Escalation (to Q2 2026 Construction Start)			23.2%	\$5,201,200	
Professional Design Fees & Expenses			10.0%	\$2,243,000	
Project Management			3.5%	\$785,000	
Furniture & Furnishings & Equipment			5.0%	\$1,011,000	
Project Contingency (incl Change Orders)			20.0%	\$4,486,000	
Permits, Insurance, Project Administration, Legal Fees etc			3.0%	\$673,000	
Goods & Services Tax (fully rebated)				\$0	
PROJECT RESERVE			10.0%	\$2,243,000	
TOTAL PROJECT COST (Including Payable GST)			JUNE 2026 \$	\$39,074,200	

CLASS D COST ESTIMATE		OPTION 3 - Small Indoor Pool			
		GROSS FLOOR AREAS			
		Basement	0.0	m2	
		Main Level	2,100.0	m2	
		TOTAL GROSS FLOOR AREA	2,100.0	m2	
		BUILDING STATISTICS			
		Existing Building Demolition			
		Footprint (Slab On grade)	2,100.0	m2	
		Pool Area	654.0	m2	
		Suspended Floor Structure	0.0	m2	
		Roof Structure	2,155.7	m2	
		Exterior Wall - Solid	1,046.8	m2	
		Exterior Glazing	382.5	m2	
		Canopies, Roof Overhang	55.7	m2	
		Element Cost			
Element		Quantity	Unit Rate	Sub-total	Total Cost
1. SUBSTRUCTURE					3,271,100
(a) Foundations		2,100	m2	602.71	1,265,700
• Perimeter foundations - strip		198	m	810.00	160,400
• Perimeter foundations - strip - interior		103	m	810.00	83,400
• Column foundations - Large Span		12	No.	6,500.00	78,000
• Pile Caps (assume 3m grid)		170	No.	2,100.00	357,000
• Foundation walls		301	m	960.00	289,000
Pool Foundations					
• Pool Walls 0m to 900mm		94	m	1,800.00	169,200
• Pool Walls 1000m to 1350mm		55	m	2,340.00	128,700
(b) Earthworks		2,100	m2	273.81	575,000
• Site prep, clearing		2,338	m2	40.00	93,500
• Excavate to rough grade -400mm below slab, dispose offsite		935	m3	185.00	173,000
• Earthworks for pool tank		785	m3	185.00	145,200
• Imported granular, backfill, slab base - placed		662	m3	90.00	59,600
• Erosion and Sedimentation Control (ESC)					103,700
(c) Special Conditions		2,100	m2	681.14	1,430,400
• Poor Soils - remove overburden		840	m3	185.00	155,400
• Pile Foundations		170	No.	7,500.00	1,275,000
2. STRUCTURE					3,108,400
(a) Slab on Grade		2,100	m2	350.62	736,300
• Concrete slab on grade		1,446	m2	245.00	354,300
Pool Slab					
• Pool Slab incl. slope, ramps etc		654	m2	425.00	278,000
• Step seating		87	m	1,200.00	104,000
(b) Upper floor Structure					0
(c) Structural Walls					188,700
• Demising walls (structural)		555	m2	340.00	188,700
(d) Roof construction		2,156	m2	1,012.84	2,183,400
• Roof structure, incl. brace bays, columns etc - LOW		1,177	m2	750.00	883,100
• Roof structure, incl. brace bays, columns etc - high long span		978	m2	1,250.00	1,222,800
• Perimeter fascia, parapet CANT		239	m	325.00	77,500
3. EXTERIOR CLADDING					2,851,900
(a) Roof finish		2,156	m2	515.14	1,110,500
• SBS Membrane Flat		2,156	m2	415.00	894,600
• Lightwell/Skylights					0
• Metal Flashing - Parapet		239	m	800.00	190,900
• Mech equip curbs, vents, fans etc.				Item	25,000
(b) Walls below ground floor		178	m2	185.19	33,000
• Waterproofing		178	m2	185.00	33,000
(c) Exterior Wall Construction above grade		1,047	m2	873.37	914,200
Exterior Wall Construction					
• stud framing and sheathing		357	m2	285.00	101,700
• stud framing and sheathing - high walls		690	m2	400.00	276,000
• Peel n stick air/VB, 125mm Insulation		1,047	m2	130.00	136,100
• Drywall on interior		897	m2	65.00	58,300
• Drywall on interior hi impact/WP		150	m2	140.00	21,000
Exterior Finishes					
• Combination Prefinished metal		357	m2	900.00	321,100

CLASS D COST ESTIMATE		OPTION 3 - Small Indoor Pool			
(d) Windows	383 m2	1,900.13			726,800
• Glazing, Curtainwall	383 m2	1,900.00		726,800	
• Glazing, Entry				Incl.	
(e) Exterior doors & screens	6 No.	8,583.33			51,500
• H/M Door and Frame	No.	2,800.00		0	
• H/M Door and Frame - double	3 Pair	5,500.00		16,500	
• Entry glazed doors - PAIR	2 Set	12,500.00		25,000	
• Automatic Operators	Item			10,000	
(f) Canopies	56 m2				15,900
• Canopy Structure/Roof Finish			See Above		
• Soffit finishes	56 m2	285.00		15,900	
(g) Roof Balconies					0
(h) Sunshades					0
4. INTERIOR PARTITIONS					Fit Out
(a) Permanent partitions					Fit Out
(b) Glazed Interior Windows & Sidelights					Fit Out
(c) Interior Doors, frames, Hardware					Fit Out
5. VERTICAL MOVEMENT					0
(a) Stairs (includes finishes & guardrails)					0
(b) Elevator					0
6. INTERIOR FINISHES					0
7. FITTINGS & EQUIPMENT					0
8. ELECTRICAL - SHELL INFRASTRUCTURE	2,100 m2	173.00			363,300
(a) Distribution	2,100 m2	85.00			178,500
(b) Lighting	2,100 m2	15.00			31,500
(c) Power	2,100 m2	6.00			12,600
(d) Fire Alarm	2,100 m2	22.00			46,200
(e) Telephone, Data & communications	2,100 m2	15.00			31,500
(f) Security	2,100 m2	30.00			63,000
(g) Public Address, AV	2,100 m2				0
9. MECHANICAL	2,100 m2	447.10			938,900
(a) Plumbing & drainage, gas piping, roof drains	2,100 m2	202.10			424,400
• Plumbing Equipment - Water Entry/PRV/BFP etc		Item	200,000		
• Plumbing fixtures - incl. all pipework, DCW/DHW			See Fit Out		
• Footing Drains	163 m	300.00		48,900	
• Roof drainage	2,156 m2	35.00		75,500	
Pool Drainage & Buried Piping to Mech Room		Item	100,000		
(b) Fire protection - sprinklers main distribution	2,100 m2	25.00			52,500
(c) HVAC	2,100 m2	200.00			420,000
• Mech Plant/Equipment	2,100 m2	200.00		420,000	
(d) Controls	2,100 m2	20.00			42,000
DIRECT SITE OVERHEADS & SUPERVISION				11.5%	1,211,400
GENERAL CONTRACTOR or CONSTRUCTION MANAGEMENT FEE				3.5%	411,300
DESIGN CONTINGENCY				10.0%	1,206,700
TOTAL NEW BUILDING SHELL CONSTRUCTION COST (Excluding GST)					\$13,363,000
GROSS FLOOR AREA: (New)	2,100 m2			\$6,363.33 /m2	

City of Pitt Meadows

May 29, 2023

Aquatics Feasibility Study

for the City of Pitt Meadows

concept design options by: FAULKNERBROWNS ARCHITECTS

PROJECT COST SUMMARY			OPTION 4 - Medium Indoor Pool
NEW BUILDING CONSTRUCTION	2,295 m2	\$9,465.88	\$21,724,200
NEW INDOOR POOL BUILDING	2,295 m2	\$9,465.88	\$21,724,200
Building Shell (see attached estimate)	2,295 m2	\$6,225.80	14,288,200
Non-Combustible Construction 4.2m - 8.5m (Single Storey)	2,295 m2		
Indoor Pool Statistics	730 m2		
Lap Pool (6 x 25m lanes)	1m to 1.35m	391.0 m2	
Leisure Pool / Lazy River	0m to .9m	280.0 m2	
Hot Pool	.9m	59.0 m2	
Fit Out/Interior construction	2,295.0 m2	\$2,277.56	5,227,000
Lobby, Reception	137.0 m2	\$2,537.00	348,000
Admin, Staff Meeting	40.0 m2	\$2,813.00	113,000
Unit Washroom (2No, 1 Shower)	16.0 m2	\$6,701.00	107,000
Guard Rm, First Aid	17.0 m2	\$3,834.00	65,000
Program Room	86.0 m2	\$2,227.00	192,000
Men's Change	32.0 m2	\$4,904.00	157,000
Men's Shower (5 Shower)	12.0 m2	\$4,883.00	209,000
Men's Washroom (6WC)	29.0 m2	\$6,845.00	199,000
Universal Change, Circ	144.0 m2	\$3,379.00	487,000
Universal Shower (8 Shower)	44.0 m2	\$3,686.00	162,000
Universal Washroom (12WC)	57.0 m2	\$6,616.00	377,000
Women's Change	32.0 m2	\$4,904.00	157,000
Women's Shower (5 Shower)	12.0 m2	\$7,889.00	95,000
Women's Washroom (4WC)	19.0 m2	\$9,584.00	182,000
Mechanical Equipment	239.0 m2	\$1,040.00	249,000
Storage	34.0 m2	\$1,158.00	39,000
Sauna/Steam	32.0 m2	\$5,670.00	181,000
Natorium (excl pool level)	1,180.0 m2	\$1,617.00	1,908,000
Wall thickness	133.0 m2		
Indoor Pool Finishing			709,000
Painting/parge finish - inside pool	994.2 m2	\$410.00	408,000
Pool Deck, Viewing	242.0 m2	\$325.00	79,000
Pool Edge, Skimmer/trench drains etc	216.2 m	\$450.00	97,000
Pool Specialties, SS Guardrails			75,000
Pool Features - Sprays			50,000
Mechanical - Water Treatment (incl. filter, pumps etc.)			1,500,000
OUTDOOR POOL CONSTRUCTION			\$0

City of Pitt Meadows

May 29, 2023

Aquatics Feasibility Study

for the City of Pitt Meadows

concept design options by: FAULKNERBROWNS ARCHITECTS

PROJECT COST SUMMARY			OPTION 4 - Medium Indoor Pool	
SITE DEVELOPMENT			\$2,229,000	
<u>Site Development, Paving, Parking, Hard/Soft Landscape</u>				
Site clearing & Preparation, remove paving, grass, fxt	5,595 m2	\$40.00		224,000
Existing Services - Relocations, Abandon				50,000
Roads - Asphalt Paving & Curbs	Repaint over extg	170 M2	\$70.00	12,000
Sidewalks and Decorative Paving				100,000
New Parking				639,000
Remedial work to existing parking, restripe etc				50,000
Hard landscaping, planters, steps, features, signage				150,000
Soft Landscaping / Planting				150,000
<u>Mechanical Civil Services (storm, sewer, water & gas)</u>				
• Water Main - new 150mm dia				65,000
• Storm drainage				60,000
• Sanitary Connection				30,000
• Gas				12,000
<u>Electrical Civil Services</u>				
• Hydro Charge for new 347/600v Service				100,000
• Incoming Underground Service Ducts/Telus/Cable, Conc Tranf Pad				45,000
• Site Lighting				75,000
General Contractor Overheads & Fee				264,000
Design Contingency				203,000
OFFSITE WORK			\$0	
Roads & Intersections				No work
Services Upgrades				No work
SUB-TOTAL CONSTRUCTION (Excluding GST)			May 2023 \$	\$23,953,200
Construction Escalation (to Q2 2026 Construction Start)			23.2%	\$5,553,900
Professional Design Fees & Expenses			10.0%	\$2,395,000
Project Management			3.5%	\$838,000
Furniture & Furnishings & Equipment			5.0%	\$1,086,000
Project Contingency (incl Change Orders)			20.0%	\$4,791,000
Permits, Insurance, Project Administration, Legal Fees etc			3.0%	\$719,000
Goods & Services Tax (fully rebated)				\$0
PROJECT RESERVE			10.0%	\$2,395,000
TOTAL PROJECT COST (Including Payable GST)			JUNE 2026 \$	\$41,731,100

CLASS D COST ESTIMATE		OPTION 4 - Medium Indoor Pool			
		GROSS FLOOR AREAS			
		Basement	0.0	m2	
		Main Level	2,295.0	m2	
		TOTAL GROSS FLOOR AREA	2,295.0	m2	
		BUILDING STATISTICS			
		Existing Building Demolition			
		Footprint (Slab On grade)	2,295.0	m2	
		Pool Area	730.0	m2	
		Suspended Floor Structure	0.0	m2	
		Roof Structure	2,361.3	m2	
		Exterior Wall - Solid	1,120.6	m2	
		Exterior Glazing	420.6	m2	
		Canopies, Roof Overhang	66.3	m2	
		Element Cost			
Element		Quantity	Unit Rate	Sub-total	Total Cost
1. SUBSTRUCTURE					3,400,200
(a) Foundations		2,295	m2	610.50	1,401,100
• Perimeter foundations - strip		211	m	810.00	170,900
• Perimeter foundations - strip - interior		103	m	810.00	83,400
• Column foundations - Large Span		12	No.	6,500.00	78,000
• Pile Caps (assume 3m grid)		159	No.	2,100.00	333,900
• Foundation walls		314	m	960.00	301,400
Pool Foundations					
• Pool Walls 0m to 900mm		134	m	1,800.00	241,200
• Pool Walls 1000m to 1350mm		82	m	2,340.00	192,300
(b) Earthworks		2,295	m2	277.47	636,800
• Site prep, clearing		2,548	m2	40.00	101,900
• Excavate to rough grade -400mm below slab, dispose offsite		1,019	m3	185.00	188,600
• Earthworks for pool tank		876	m3	185.00	162,100
• Imported granular, backfill, slab base - placed		771	m3	90.00	69,400
• Erosion and Sedimentation Control (ESC)					114,800
(c) Special Conditions		2,295	m2	593.59	1,362,300
• Poor Soils - remove overburden		918	m3	185.00	169,800
• Pile Foundations		159	No.	7,500.00	1,192,500
2. STRUCTURE					3,427,600
(a) Slab on Grade		2,295	m2	347.58	797,700
• Concrete slab on grade		1,565	m2	245.00	383,400
Pool Slab					
• Pool Slab incl. slope, ramps etc		730	m2	425.00	310,300
• Step seating		87	m	1,200.00	104,000
(b) Upper floor Structure					0
(c) Structural Walls					188,700
• Demising walls (structural)		555	m2	340.00	188,700
(d) Roof construction		2,361	m2	1,033.82	2,441,200
• Roof structure, incl. brace bays, columns etc - LOW		1,184	m2	750.00	888,300
• Roof structure, incl. brace bays, columns etc - high long span		1,177	m2	1,250.00	1,471,100
• Perimeter fascia, parapet CANT		252	m	325.00	81,800
3. EXTERIOR CLADDING					2,993,500
(a) Roof finish		2,361	m2	510.86	1,206,300
• SBS Membrane Flat		2,361	m2	415.00	980,000
• Lightwell/Skylights					0
• Metal Flashing - Parapet		252	m	800.00	201,300
• Mech equip curbs, vents, fans etc.				Item	25,000
(b) Walls below ground floor		190	m2	184.83	35,100
• Waterproofing		190	m2	185.00	35,100
(c) Exterior Wall Construction above grade		1,121	m2	787.65	882,600
Exterior Wall Construction					
• stud framing and sheathing		261	m2	285.00	74,300
• stud framing and sheathing - high walls		860	m2	400.00	344,000
• Peel n stick air/VB, 125mm Insulation		1,121	m2	130.00	145,700
• Drywall on interior		971	m2	65.00	63,100
• Drywall on interior hi impact/WP		150	m2	140.00	21,000
Exterior Finishes					
• Combination Prefinished metal		261	m2	900.00	234,500

CLASS D COST ESTIMATE		OPTION 4 - Medium Indoor Pool			
(d) Windows	421 m2	1,899.90		799,100	
• Glazing, Curtainwall	421 m2	1,900.00	799,100		
• Glazing, Entry			Incl.		
(e) Exterior doors & screens	6 No.	8,583.33		51,500	
• H/M Door and Frame	No.	2,800.00	0		
• H/M Door and Frame - double	3 Pair	5,500.00	16,500		
• Entry glazed doors - PAIR	2 Set	12,500.00	25,000		
• Automatic Operators	Item		10,000		
(f) Canopies	66 m2		See Above	18,900	
• Canopy Structure/Roof Finish					
• Soffit finishes	66 m2	285.00	18,900		
(g) Roof Balconies				0	
(h) Sunshades				0	
4. INTERIOR PARTITIONS					Fit Out
(a) Permanent partitions				Fit Out	
(b) Glazed Interior Windows & Sidelights				Fit Out	
(c) Interior Doors, frames, Hardware				Fit Out	
5. VERTICAL MOVEMENT					0
(a) Stairs (includes finishes & guardrails)				0	
(b) Elevator				0	
6. INTERIOR FINISHES					0
7. FITTINGS & EQUIPMENT					0
8. ELECTRICAL - SHELL INFRASTRUCTURE	2,295 m2	173.03			397,100
(a) Distribution	2,295 m2	85.00		195,100	
(b) Lighting	2,295 m2	15.00		34,400	
(c) Power	2,295 m2	6.00		13,800	
(d) Fire Alarm	2,295 m2	22.00		50,500	
(e) Telephone, Data & communications	2,295 m2	15.00		34,400	
(f) Security	2,295 m2	30.00		68,900	
(g) Public Address, AV	2,295 m2			0	
9. MECHANICAL	2,295 m2	454.95			1,044,100
(a) Plumbing & drainage, gas piping, roof drains	2,295 m2	209.93		481,800	
• Plumbing Equipment - Water Entry/PRV/BFP etc		Item	220,000		
• Plumbing fixtures - incl. all pipework, DCW/DHW			See Fit Out		
• Footing Drains	181 m	300.00	54,200		
• Roof drainage	2,361 m2	35.00	82,600		
Pool Drainage & Buried Piping to Mech Room		Item	125,000		
(b) Fire protection - sprinklers main distribution	2,295 m2	25.00		57,400	
(c) HVAC	2,295 m2	200.00		459,000	
• Mech Plant/Equipment	2,295 m2	200.00	459,000		
(d) Controls	2,295 m2	20.00		45,900	
DIRECT SITE OVERHEADS & SUPERVISION				11.5%	1,295,200
GENERAL CONTRACTOR or CONSTRUCTION MANAGEMENT FEE				3.5%	439,700
DESIGN CONTINGENCY				10.0%	1,290,800
TOTAL NEW BUILDING SHELL CONSTRUCTION COST (Excluding GST)					\$14,288,200
GROSS FLOOR AREA: (New)	2,295 m2			\$6,225.80 /m2	

City of Pitt Meadows Aquatics Feasibility Study

Appendix C: *Operational Cost Estimates*

Operational Cost Context & Methodology Overview

Operating Costs for indoor and outdoor public pools are highly regulated and largely fixed. About 70% of the operating costs of a typical pool are relatively or completely fixed (e.g. they don't vary whether there is one person swimming or 40 people swimming in the pool enclosure) and are associated with a required minimum number of lifeguarding staff, water quality systems, management staff, insurance, utilities, and staffing a customer service control point; none of which vary directly with the volume of use.

Operating Revenues are largely variable. In other words, if use increases by 10%, operating revenues go up roughly 10% as the revenue associated with swims in each category of aquatic service is largely constant on a per swim basis.

As a result of these two dynamics, it is very important, from an economic and environmental sustainability point of view, to operate any pool as close to full capacity as is reasonably possible. A pool operating at a fraction of its total capacity has a high operating cost, a low operating revenue, and a very high net subsidy per swim and energy consumption per swim. A pool operating close to its full capacity has a high operating cost, a high operating revenue, and a much lower net subsidy and energy consumption per swim.

The methodology used to undertake the operating cost analysis presented in this document is largely based on the relationship between swims per capita, the net cost per swim, and total subsidy. Provided below are brief definitions on these key terms.

Swims per capita: reflects the total number of annual swim visits per resident (e.g. if public aquatics facilities in a community accommodate 50,000 annual swims for a municipal population of 10,000 residents, we'd say that community has 5 swim visits per capita). A swim visit reflects every time a patron uses the pool, not the number of residents that are users of the pool.

Net cost per swim: reflects the total cost (revenues less expenditures) to provide the aquatics service / facility.

Subsidy: the total annual cost to taxpayers of providing the aquatics service.

Potential Aquatics Operating Costs

Outdoor Options

Two outdoor pool program options have been developed. Water spaces for these two options are summarized in the following table.

Table 1: Outdoor Pool Options Overview

Option	Summary of Aquatics Amenities
Small Outdoor Pool	<ul style="list-style-type: none">• 6 x 25m main tank with beach entry and leisure pool• Hot pool
Medium Outdoor Pool	<ul style="list-style-type: none">• 6 x 25m main tank• Separate leisure pool with beach entry• Hot pool

Current outdoor swims per capita in Pitt Meadows are low at approximately 0.3 outdoor swim visits per capita. Two key factors are likely to drive increased swim visitation at a new outdoor pool in Pitt Meadows:

- The increased appeal of the leisure aquatics space and amenities.
- The overall volume of water space to accommodate additional categories of aquatics services.
- The expanded season that the new facility would operate.

It is reasonable to assume that these factors could increase swim visits per capita to between 0.5 and 0.75 outdoor swims, which would generally be consistent with regional outdoor swim visitations.

The following table identifies the current net cost per swim visit to the City, which is \$21.23 per swim visit.

Table 2: Current Harris Road Pool Operating Position

Annual Harris Road Pool Net Operating Costs (Approximate, 2022)	\$125,000
Approximate Swim Visits (Approximate, 2022) *	5,700
Net Cost per Swim	\$21.23

**Swim visits have fluctuated between 2,081 and 5,938 between 2014 and 2022.*

The following table summarizes estimated operating impacts of the two potential outdoor pool scenarios based on the following two key assumptions.

- **The overall net cost per swim is likely to remain similar to current (\$20 - \$22).** If pool operations are broken into sub-seasons, the net cost per swim will be higher during the peak summer months (July and August) based on significantly elevated levels of use. However, it is probable that lower levels of use during shoulder season months (e.g. May-June) and (September – early October) will result in an overall balancing out.
- **The facility will not be operated into far shoulder (non-demand) seasons (e.g. April/early May and late October).** Operating into these seasons will have a significantly negative impact on expenses and subsidy levels.
- **A small increase in the net cost per swim is attributed to the larger pool option to reflect increased expenditures.** However, this increased expenditure is largely offset by increased levels of use (0.75 swims per capita for the larger pool option, 0.5 swims per capita for the smaller pool option).
- **The swims per capita are based on the City’s 2026 projected population of 22,616 residents.**¹ Pitt Meadows is expected to experience modest levels of growth, reaching 24,000 residents sometime between 2036 and 2041.

¹ Metro Vancouver Regional Growth projections.

- **A key premise of this analysis is that the City’s cost structures to provide an outdoor pool would remain similar.** The City will need to further explore the attributes associated with both contracted and direct operation.

Table 3: Estimated Annual Subsidy – Outdoor Pool Options

	Outdoor Swim Visits per Capita	Net Cost Per Swim Assumption	Estimated Annual Subsidy Impact
Small Outdoor Pool	0.5	\$20	\$226,160
Medium Outdoor Pool	0.5	\$22	\$248,776

Indoor Options

Two indoor pool program options have been developed. Water spaces for these two options are summarized in the following table.

Table 4: Indoor Pool Options Overview

Option	Summary of Aquatics Amenities
Small Indoor Pool	<ul style="list-style-type: none"> • 6 x 25m main tank with connected beach entry and leisure pool • Hot pool
Medium Indoor Pool	<ul style="list-style-type: none"> • 6 x 25m main tank • Separate leisure pool with beach entry and lazy river • Hot pool

As the City does not currently have an indoor pool from which to base projections, two methods can be used to conduct preliminary operating cost analysis.

1. Benchmarking other similar facilities.
2. Extrapolating potential swim visits to ‘typical’ unit costs per swim visit.

Benchmarking

The following table reflects a benchmarking comparison of other aquatics facilities that are generally aligned in scale with the options being explored. As reflected in the table, net subsidies for these facilities range between \$1.7 million and \$2.7 million with total swim visits having a significant impact on whether a facility is within the low or high end of this subsidy range.

Table 5: Indoor Pools Benchmarking

Facilities*	Comparison to the Pitt Meadows Options	Net Subsidy (Approximate)	Swim Visits (Approximate)	Net Cost per Swim (Approximate)
Maple Ridge Leisure Centre**	Medium	\$2,500,000	230,000	\$10.87

North Peace Leisure Pool (Fort St. John)	Small / Medium	\$2,700,000	123,000	\$21.95
City Centre Aquatics Complex (Coquitlam)	Medium	\$1,700,000	463,000	\$3.67
Poirier Sport and Leisure Complex (Coquitlam)	Small / Medium	\$1,700,000	340,000	\$5.00
Ravensong Aquatics Centre (Qualicum Beach)	Small / Medium	\$2,000,000	130,000	\$15.38

**Numbers for all facilities have been approximated to reflect typical years of operations. It is important to note that providers account for department overhead and shared functions with other recreation amenities differently. As such, there is likely some margin of error in the figures identified.*

***The figure for the Maple Ridge Leisure Centre reflects a general mid-point subsidy for complete years of operation prior to the 2019-2022 shutdown for renovations and COVID-19.*

Extrapolating Potential Swim Visits to Unit Costs Per Swim Visit

The table below reflects potential levels of pool use based on per capita swim visit scenarios.

Table 6: Swims per Capita Projections

Scenario	Likely Level of Available Water Capacity Used	Total Swim Visits (Based on 2026 Population Projections) ²
3.5 swims per capita	Low-Moderate	79,156
4.5 swims per capita	Moderate	101,772
5.5 swim per capita	Moderate – High	124,388
6.5 swims per capita	High (nearing capacity)	147,004

The scenarios in the previous chart were then extrapolated to typical net costs per swim visits, reflecting the overarching assumption (as discussed in the initial section of this document) that the net cost per swim decreases as usage increases.

Table 7: Estimated Annual Subsidy – Indoor Pool Options

	Net Cost Per Swim Visit	Total Estimated Subsidy
3.5 swim visits per capita	\$25	\$1,978,900

² Metro Vancouver Regional Growth projections.

4.5 swim visits per capita	\$20	\$2,035,440
5.5 swim visits per capita	\$15	\$1,865,820
6.5 swim visits per capita	\$10	\$1,470,040

Summary

Estimated Operating Impacts

The following chart summarizes the estimated net operating subsidy for both groupings of pool options. A 25% margin of error has been applied to upset annual subsidy amount (see far right column). Given the number of unknowns with the project (e.g. site, operating approach, potential amenity synergies, date of project completion, etc.) is strongly suggested that the City use this figure for budgeting purposes.

Table 8: Summary of Estimated Annual Subsidy Impact

Options Grouping	Estimated Annual Subsidy Impact	Estimated Annual Subsidy Impact + 25% Contingency
Outdoor (small or medium option)	\$226,160 - \$248,776	\$282,700 - \$310,970
Indoor (small or medium option)	\$1,470,040 - \$2,035,440	\$1,837,550 - \$2,544,300

While the ‘small’ and ‘medium’ options under each of the indoor and outdoor grouping are of a different scale and will have significantly different capital costs, the overall operating subsidy impact between the small and medium options is anticipated to be relatively similar based on the following rationale.

- Both the small and medium options generally provide the same aquatics services and experiences – the larger options just do so through a more optimal distribution water space (e.g. separate tanks). Guarding and staffing levels, the most significant cost centre for an aquatics facility, should be relatively similar for both size options under each of the indoor and outdoor groupings.
- The increase in non-staffing costs such as utilities and supplies associated with the larger options will be offset by some level of increased use and ability to generate revenue through higher revenue value swims (e.g. increased rental opportunities due to separate tanks).

Other Important Considerations

A number of additional considerations are identified as follows that could impact the estimated annual operating subsidy amounts identified.

- The figures identified do not include capital or lifecycle reserve contributions. It is strongly recommended that the City factor budgeting for capital and lifecycle into long-term financial impacts analysis based on current policy / practices and anticipated facility lifespan.

- The projections identified are based on current aquatics market conditions. The development of other new aquatics infrastructure in the region (e.g. a second pool in Maple Ridge) could impact demand depending on the facility program and location of the facility.
- The approach used to provide aquatics infrastructure to residents will impact operating costs and subsidy levels. Table 9 summarizes the typical impacts, pros, and cons associated with each type of approach.

Table 9: Operating Approaches Overview

Approach	Relative Operating Subsidy Impact	Pros	Cons
Municipal Ownership and Operations	\$\$\$	<ul style="list-style-type: none"> • Full control of programming and space allocation. • Full control of experience quality. • Often higher levels of maintenance care and investment (resulting in long-term mitigation of issues) 	<ul style="list-style-type: none"> • Highest operating cost options.
Municipal Ownership and Contracted Operations	\$\$	<ul style="list-style-type: none"> • Ability to achieve operating cost efficiencies. • Agreement can be structured to maintain some control of programming and space allocations. 	<ul style="list-style-type: none"> • Do not fully control programming or experience quality. • Contracted operators often need to find cost efficiencies with maintenance – less attention paid to mitigating potential longer term issues.
Partner Ownership and Operations with Municipal Support (typically some combination of land, capital, and an operating contribution)	\$	<ul style="list-style-type: none"> • Often the least expensive way to provide a recreation amenity. • Leveraging partnerships can have broader community benefits that positively impact other service areas within recreation. • Opportunity to leverage external 	<ul style="list-style-type: none"> • Minimal control of space programming, allocation, and quality. • High level of risk if partnership isn't successful.

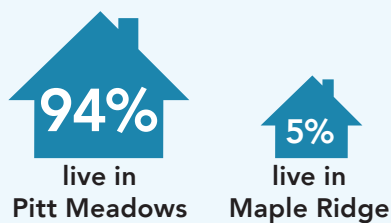
		resources and efficiencies.	
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Appendix D

What We Heard: Engagement 2 Results

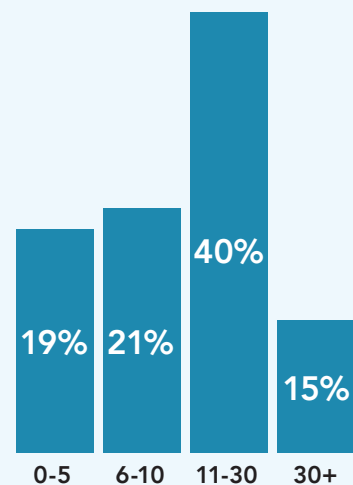
Survey 2 was conducted from June 2 to June 23, 2023 as a registered online survey and as printed hard copies made available at City Hall, the Pitt Meadows Family Recreation Centre. Survey 2 received a total of 601 responses. A summary of the results is provided below.

Community of Residence



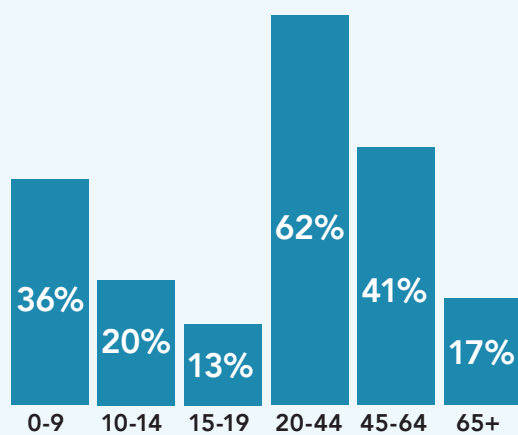
Note: Strong participation from Pitt Meadows residents

Years lived in Pitt Meadows



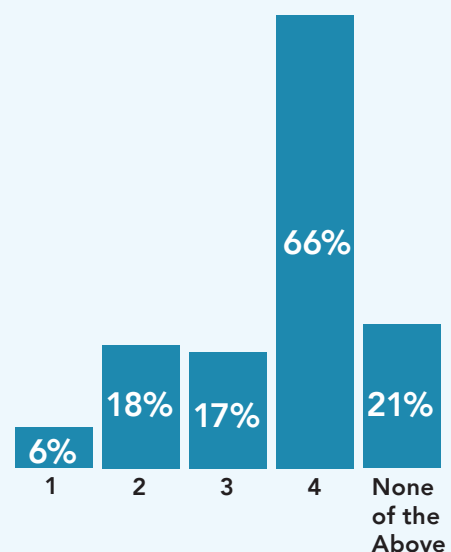
Note: Strong participation from both new and long-time residents

Age groups



Note: As compared to regional demographics:
— Strong participation by families with children

Preferred Pool Options



Note: Strongest preference for Medium Indoor option or none

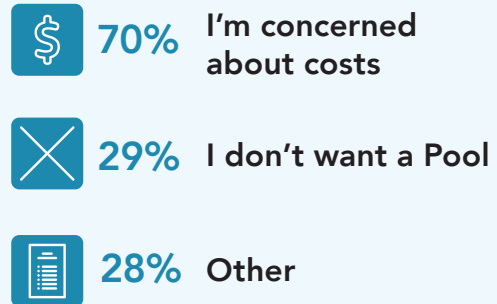
Reasons for selecting Options 1-4 (N=476)



Other noted reasons:

- Preferred location (24%)
- Concerned about costs (18%)
- Pool should be built with future growth in mind
- Interest in heated outdoor option to extend season

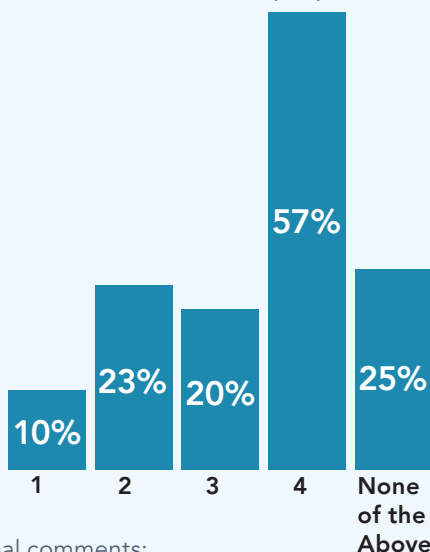
Reasons for selecting 'None of the Above' (N=125)



Other noted reasons:

- Pool options don't meet my needs (7%)
- Concern about inadequate parking on proposed sites
- Concern about displacing existing amenities on park sites
- Concern about taxes and competing City projects (ie Harris Road Underpass)

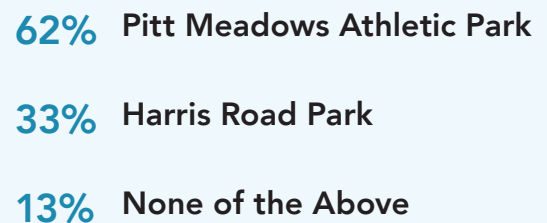
Pool options that respondents would be willing to pay for through an increase in property taxes



Additional comments:

- Requests to investigate sponsorship/partnership opportunities in lieu of tax increase

Preferred potential sites for a new pool facility



Other responses:

- Don't know / no opinion (8%)
- Other (5%)

Reasons for selecting Harris Road Park (N=190)



57% Proximity to home



57% Co-location to other amenities



36% Easier public transit access



25% Minimizes disruption to other park activities

Other noted reasons:

- Easier active transportation access (24%)
- Easier vehicle access (21%)
- Easier parking (20%)

Reasons for selecting Pitt Meadows Athletic Park (N=372)



64% Co-location to other amenities



62% Easier parking



54% Easier vehicle access



49% Proximity to home

Other noted reasons:

- Minimizes disruption to other park activities (39%)

What We Heard: Open House Booth at Pitt Meadows Day

An open house booth was held at Pitt Meadows Day at Harris Road Park on June 3, 2023 from 11am to 7pm. The booth provided information on the Aquatics Feasibility Study, concept design options and associated costing. A voting board was provided so visitors could vote for their favourite pool design option. There were also pool design and colouring activities for children. Approximately 315 people visited the open house booth over the course of Pitt Meadows Day. A summary of the voting results is provided below.

