

**FINANCIAL MANAGEMENT COMMITTEE**

*HIS WORSHIP, THE MAYOR  
AND COUNCILLORS*

**SUBJECT: BURNABY LAKE AQUATIC AND ARENA FACILITY PROJECT - PHASE  
TWO FUNDING REQUEST**

**RECOMMENDATIONS:**

1. THAT Council authorize staff to advance the Burnaby Lake Aquatic and Arena Facility project into detailed design, subject to funding and award of contract approval for the phase two scope of work, as outlined in the report.
2. THAT Council authorize the use of Community Benefit Reserves in the amount of \$18,000,000 to finance detailed design, City development approvals, tender documents, and preliminary site servicing and offsite costs for the Burnaby Lake Aquatic and Arena Facility project, as outlined in the report.
3. THAT a copy of the report be forwarded to the Parks, Recreation and Culture Commission for information.

**REPORT**

The Financial Management Committee, at its meeting held on 2020 February 12, received and adopted the *attached* report seeking Council authorization for the use of Community Benefit Reserves to finance the second phase of work for the Burnaby Lake Aquatic and Arena Facility project, which includes detailed design, City development approvals, tender documents, and preliminary site servicing and offsite costs.

Respectfully submitted,

Copied to: City Manager Director Planning & Building Director Engineering Director Parks, Recreation & Cultural Services Director Corporate Services Director Finance Director Public Safety & Community Services Purchasing Manager City Solicitor
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Mayor M. Hurley  
Chair

Councillor S. Dhaliwal  
Vice Chair

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**TO:** CHAIR AND MEMBERS  
FINANCIAL MANAGEMENT COMMITTEE **DATE:** 2020 February 05

**FROM:** MAJOR CIVIC BUILDING PROJECT  
COORDINATION COMMITTEE **FILE:** 4230 08  
*Reference: BLAA*

**SUBJECT:** BURNABY LAKE AQUATIC AND ARENA FACILITY PROJECT – PHASE  
TWO FUNDING REQUEST

**PURPOSE:** To request the use of Community Benefit Reserves to finance the second phase of work for the Burnaby Lake Aquatic and Arena Facility project, which includes detailed design, City development approvals, tender documents, and preliminary site servicing and offsite costs.

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## **RECOMMENDATIONS**

1. **THAT** the Financial Management Committee recommend Council authorize staff to advance the Burnaby Lake Aquatic and Arena Facility project into detailed design, subject to funding and award of contract approval for the phase two scope of work, as outlined in this report.
2. **THAT** the Financial Management Committee recommend Council authorize the use of Community Benefit Reserves in the amount of \$18,000,000 to finance detailed design, City development approvals, tender documents, and preliminary site servicing and offsite costs for the Burnaby Lake Aquatic and Arena Facility project, as outlined in this report.
3. **THAT** a copy of this report be forwarded to the Parks, Recreation and Culture Commission for information.

## **REPORT**

### **1.0 INTRODUCTION**

Designed and built in the early 1960's, CG Brown Memorial Pool and Burnaby Lake Ice Rink no longer meets today's public expectations for civic amenities. Both facilities are due to be redeveloped. To this end, the Burnaby Lake Aquatic and Arena Facility (BLAA) project has been identified as a priority community amenity project to redevelop these ageing facilities within the Burnaby Lake Sports Complex.

On 2018 December 03, Council authorized the commission of feasibility and schematic design studies for a new aquatics and arena facility within the Burnaby Lake Sports Complex, and approved the use of Community Benefit Reserves in the amount of \$2,000,000 (BAX.0017) to undertake this work.

Subsequently, on 2019 March 25, Council approved a recommendation from staff that HCMA Architecture + Design (HCMA) be retained to undertake the phase one work program for the project, culminating in a schematic design report. Over the proceeding months, HCMA, their team of expert sub-consultants, and a working group of City staff, have worked collaboratively together to produce a schematic design report for the BLAA project, which summarizes the work completed to-date, and provides the basis for Council to determine if the BLAA project is to advance to phase two. Phase two includes detailed design, City development approvals, tender documents and preliminary site servicing and offsite costs.

The following sections of this report summarize the results of the phase one work, the overall estimated project cost and schedule, as well as the requested funding required through the Community Benefit Reserve to fund the second phase of the project.

The 2020 – 2024 Provisional Financial Plan proposes funding for the second phase of the Burnaby Lake Aquatic and Arena Facility project in the amount of \$18,000,000. Upon approval of this funding request by Council, these expenditures will be included in the 2020 – 2024 Financial Plan (Planning Section).

## **2.0 POLICY SECTION**

The advancement of this project aligns with the following goals and sub-goals of the Corporate Strategic Plan:

- **A Safe Community**
  - Community Amenity Safety – Maintain a high level of safety in City buildings and facilities for the public and City staff
- **A Dynamic Community**
  - City Facilities and Infrastructure – Build and maintain infrastructure that meets the needs of our growing community
- **An Inclusive Community**
  - Serve a Diverse Community – Ensure City services fully meet the needs of our dynamic community
  - Create a Sense of Community – Provide opportunities that encourage and welcome all community members and create a sense of belonging
- **A Healthy Community**
  - Healthy Life – Encourage opportunities for healthy living and well being
  - Healthy Environment – Enhance our environmental health, resilience and sustainability
- **A Thriving Organization**
  - Financial Viability – Maintain a financially sustainable City for the provision, renewal and enhancement of City services, facilities and assets

### **3.0 SCHEMATIC DESIGN REPORT SUMMARY**

#### **3.1 *The Site***

CG Brown Memorial Pool and Burnaby Lake Ice Rink comprise two thirds of a larger aquatic and arena facility that currently occupies 3676 Kensington Avenue, within the Burnaby Lake Sports Complex (Sketches #1 and #2 *attached*). Bill Copeland Sports Centre, a 2,000 seat arena, sits on the northern portion of the site, and is directly connected to the Burnaby Lake Ice Rink, with CG Brown Memorial Pool located a short walk across the site to the south. The site at 3676 Kensington Avenue has been identified as the preferred location for the new aquatics and arena facility, given its central location within the Burnaby Lake Sports Complex, its proximal siting in relation to major transportation routes, and the potential for integration with Bill Copeland Sports Centre.

In order to develop a larger aquatics and arena facility on the site, a rezoning application (Rezoning Reference #19-49) was submitted in 2019 October to rezone the site to the CD Comprehensive Development District (based on P3 Park and Public Use District and the Burnaby Lake Sports Complex Community Plan as guidelines). The use of CD Comprehensive Development zoning is required for this site in order to permit variances to site coverage, setbacks and parking requirements.

Preliminary plans for the development site also include the closure of Sperling Avenue along the eastern edge of the property, in order to integrate portions of the right-of-way into the development site, as well as to create a north-south connection that better accommodates both pedestrians and cyclists. The City owned parking lot to the east of 3676 Kensington Avenue, across Sperling Avenue, is also proposed to be included in the development site, and will function as accessory parking to the new facility, as well as continuing to provide accessory parking for the rugby club and surrounding sports fields.

#### **3.2 *Vision and Guiding Principles***

A visioning workshop was held on 2019 May 28 in order to develop a unified vision and guiding principles to help inform the programming requirements and design. Staff from a wide range of City departments and disciplines attended to provide input and help shape the project vision and guiding principles. The proceeding vision and guiding principles for the project were developed by staff, and refined through subsequent public feedback.

***Vision Statement:*** Burnaby Lake Aquatics and Arena Facility is a destination recreation facility that is welcoming to all – inspiring positive change within communities and the unique local environment.

#### ***Guiding Principles***

The Burnaby Lake Aquatic and Arena Facility will:

- *Inspire Transformation* – demonstrate leadership in sports excellence and empower health and wellness for all the community;

- *Support Participation for All* – be a hub where people of all ages, abilities, genders, and cultures are included and can be themselves, providing accessible and safe spaces that reduce barriers to recreation;
- *Connect people and Place* – join together the wider community and integrate into the surrounding site, enhancing city wide connections among communities, and between people and place;
- *Facilitate Environmental Renewal* – contribute to the well-being and positive renewal of the unique local environment, be responsive to the changing needs of users, and positively contribute to the local ecosystem; and,
- *Be Innovatively Operated* – a leader and innovator in sustainable operations, with positive social, environmental, and economic impact as a priority value.

### 3.3 Building Program

In order to confirm the community need and aspirations for new aquatic and arena facilities within the City, a needs assessment was undertaken. The needs assessment included both quantitative and qualitative data collection methodologies, and included in-depth market research and review of best practices, as well as extensive public and stakeholder engagement.

The initial round of public engagement, undertaken over early summer 2019, included a public survey, stakeholder workshops, and a range of outreach events across the City designed to generate ideas on the types of facilities that the public would like to see included in this project. To raise awareness of the project and the initial public engagement events, staff developed postcards, posters, advertisements in local newspapers, sent out social media posts, and created a dedicated project webpage, which will continue to be updated throughout the project and allows for the public to submit questions and comments directly to staff. In summary, through the initial public consultation process, staff consulted with twelve aquatic stakeholder groups, nine arena stakeholder groups, spoke with 600+ people at five outreach events, and received over 1,200 responses to the public survey.

Broadly supported principles arising out of the public consultation process included the following:

- *Larger aquatics facility* – A larger and more diverse aquatics facility that reflects the varying needs of the community;
- *Multi-use and flexible* – A multi-use aquatic and arena facility that is a family friendly facility for all ages and abilities, but also supports fitness and sports excellence;
- *Enhanced programming* – Additional swim lesson capacity and fitness facilities and classes; and,
- *Connection to the natural setting* – Utilize the proximity to Burnaby Lake and the associated trails for socialization and recreation opportunities.

Based on feedback from the initial public and stakeholder engagement, and the broader results of the needs assessment study, the following facility program for the BLAA project was established:

- an NHL sized arena pad with five change rooms, support offices, a multi-purpose room, storage, ice resurfacing, mechanical, electrical and refrigeration rooms, a skate shop, and 200 spectator seats;
- an aquatics facility that includes a leisure pool, hot pools, sauna and steam rooms, a 50 m (10 lane) tank with two bulkheads and a moveable floor, a secondary 25 m (6 lane) tank, two supporting multi-purpose rooms, offices, change rooms (including a high proportion of universal change rooms), recreational diving, and 750 spectator seats; and,
- supporting amenities including a large lobby, additional multi-purpose rooms, a commercial retail unit, food and beverage concession and commissary services, sports hall of fame display area, a community fitness centre, general storage, and both childminding and a licensed childcare facility.

On 2019 November 06, staff hosted a follow up public open house at City Hall to present the results of the needs assessment, and provide an opportunity for the public and stakeholders to provide feedback on the proposed program.

In total, the new development is estimated to have a gross building area, which includes supporting mechanical spaces, of approximately 20,000 m<sup>2</sup> (215,278 sq. ft.). These facilities would be in addition to the Bill Copeland Sports Centre, which is proposed to be retained on the site and integrated into the new development. Should the project progress into detailed design, the building program and size of individual components will continue to be refined through design review and input from the working group and public and stakeholder input.

### **3.4 *Architecture and Urban Design***

The design team, working in concert with City staff, established the following urban design principles to help guide the building and site design:

- address significant grade changes across the site;
- maximize views from the site;
- create two street characters along Kensington Avenue and Sperling Avenue;
- co-locate the arenas to maximize operational efficiencies;
- elevate the aquatics above the water table and to maximize views;
- prioritize pedestrian legibility and permeability;
- enhance the connection to the surrounding nature; and,
- establish a civic presence through expressive and engaging architecture.

The resultant schematic design for the site proposes a three storey building that is integrated with the existing Bill Copeland Sports Centre, creating one seamless recreation facility. The arenas, aquatics facilities, and other supporting amenities are all connected and accessed via a three storey atrium lobby that doubles as highly valued social space. The lobby fronts onto and activates both the Kensington Avenue and Sperling Avenue frontages, and creates a connection between the civic edge along Kensington Avenue, and the more natural and quieter setting of Burnaby Lake Regional Nature Park.

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From: *Major Civic Building Project Coordination Committee*  
Re: *Burnaby Lake Aquatic and Arena Facility Project – Phase Two Funding Request*  
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At the lower level of the building, at the Sperling Avenue grade, the arenas are proposed to be co-located and accessed via the shared lobby space to allow for ease of movement between the arenas, as well as to maximize operational efficiencies with centrally located support services. The licensed childcare facility is also proposed on the lower level, along the Sperling Avenue frontage, with direct access from the exterior. The underground parking is also located at this level, with a direct connection into the shared lobby space. Moving up one level, to the Kensington Avenue grade, the aquatics facility is proposed on the southern portion of the site, and is again accessed via the shared three storey atrium lobby. The child-minding area, main reception, and café/commercial retail unit are also proposed on this level. From this level, patrons will be able to view down to the arenas from the shared lobby space. Finally, on the upper level of the building, the fitness centre, two related multi-purpose rooms, and the fixed aquatic seating/viewing areas are proposed.

The building itself has been strategically sited within the development site to both maximize open space, as well as address and activate the surrounding street frontages. To breakdown the scale and massing of the building, the building form has been separated into a series of connected volumes. The large volumes house the larger programmatic elements, such as the swimming pools and arenas; and the smaller interspaced volumes focus more on housing the support and social spaces. Natural light management is a significant design challenge, and plays an integral role in the buildings proposed design, with arenas and pools typically requiring glare management; whereas the support and social spaces benefit from lots of natural light. To balance these contrasting light requirements, the design team are proposing more solid facades on the larger volumes, particularly on the east and west facades, and greater use of glazing and skylights on the small volumes. The design team has reviewed materiality on a very preliminary basis, and in keeping with the surrounding natural setting, the team is initially proposing a material pallet that takes its cues and colors from the surrounding natural environment, proposing a textured stone like cementitious panel cladding, interwoven with strategically located glazing and extensive green roofs on the smaller volumes. Currently, no upgrades to the exterior of the Bill Copeland Sports Centre are contemplated. However, should subsequent input be received that upgrades are desirable, the design team can explore the feasibility of this during detailed design.

The landscape design is also in the preliminary stages. Key aspects of the landscape design to-date include a welcoming civic plaza along the Kensington Avenue frontage, and a secondary plaza and terrace along the Sperling Avenue frontage. Significant tree coverage across the site, as well as grade manipulation in specific areas of the site will enhance views, improve site access, protect and buffer the site from heavy vehicular traffic, as well as to provide additional visual stimulation in the landscape. A central goal of the landscape design, and to a large extent the civil design, is also to minimize the need for explicit wayfinding, while enhancing connectivity both across the site, and to the wider Burnaby Lake Sports Complex, facilitating intuitive and safe pedestrian and bicycle movements between the new facility, Fortius Sport and Health Centre and the adjacent sports fields to the west of the development site, and the popular natural trails to the east of the site.

Subject to Council approval to advance the project to detailed design, staff will initiate a further touchpoint with the public and stakeholders in the spring to present the findings of the schematic design report, and seek input on the proposed building and site design. Details of the public and stakeholder outreach event(s) would be provided to members of Council via memorandum at a later date.

### **3.5 Transportation**

The existing site is primarily vehicular orientated, and while the site may continue to be predominately accessed by private vehicles into the future, the design team has focused on improving site access for a range of travel modes, including walking, transit, and cycling. Some of the transportation initiatives and design changes proposed in the schematic design include:

- realignment of vehicular access from Kensington Avenue to align with the existing intersection;
- significant upgrades to the surrounding road network to improve traffic flow into and around the site, including the creation of left turn lanes on Kensington and Sprott Street;
- 320 onsite parking spaces comprised of 129 underground parking spaces, and 191 surface parking spaces, with surface parking redesigned to reduce its visual prominence on the site;
- Portion of onsite parking spaces to be provided with level 2 electric vehicle charging stations;
- 14 drop-off stalls proximally located and orientated to each entrance;
- new team bus parking areas and loading zones;
- improvements to the existing Sperling Avenue parking lot to incorporate new vegetation and swales;
- secure bike parking facilities;
- relocation of the bus stop from the north east corner of Joe Sakic Way and Kensington Avenue to be more proximal to the site;
- sidewalk improvements along all site frontages, as well as a new multi-use pathway along the Kensington frontage;
- the partial closure of Sperling Avenue, and an improved surface treatment to prioritize pedestrians and cyclists coming from Sperling/Burnaby Lake SkyTrain Station; and,
- connections to local trails within the Burnaby Lake Regional Nature Park.

### **3.6 Sustainability**

Building on the City’s well-established green-building and sustainability policies and bylaws, the design team approached sustainability with a holistic and wide ranging lens, considering both social and environmental sustainability requirements in categories ranging from ecosystems and watershed, to water conservation, energy efficiency and greenhouse gas (GHG) reduction, climate resilience, sustainable materials, sustainable operations, solid waste and recycling, and food services.

On energy use and emissions, the design team were tasked with exploring the viability of achieving up to Step Code 4, as well as low to zero greenhouse gas (GHG) emissions in the new facility, in line with Council’s recently adopted climate emergency GHG reduction targets. Both targets are challenging in this building typology, given the high levels of energy consumption required to operate aquatic and arena facilities. Energy modelling on the proposed schematic design indicates that Step Code 4 is extremely challenging to achieve. However, the proposed design incorporates a highly efficient envelope, and mechanical and electrical systems that far exceed building code standards for energy use. The mechanical system will reclaim waste heat from the arena ice-making process for other uses in the facility. The design also proposes an all-electric system to reduce and eventually eliminate GHG emissions from the facility.

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The public realm and building design also includes a number of sustainable site strategies focused on protection of ecological habitat, biodiversity, sustainable water management, and responsible resource management. These strategies include, but are not limited to:

- additional trees and open green spaces on the site;
- significant green roofs to help reduce storm water runoff;
- bio-swales and infiltration galleries to increase the permeability and ecological value of the site;
- use of predominantly native and drought resistant planting to support local wildlife and their habitats;
- integrated building technologies that reduce the use of disposable resources, minimize the use of potable water for non-potable uses, and allow for the adaptability of spaces overtime to reduce the need for retrofitting and refurbishment;
- strategic placement of glazing to minimize mechanical cooling and heating of the facility;
- electric vehicle charging;
- remediation of surrounding watercourses;
- measures to promote multi-modal travel including transit, cycling and walking; and,
- best practices in solid waste and recycling operations.

If the project is approved to progress to detailed design, additional opportunities for sustainable design will be considered, including the use of materials and construction methods, which include low amounts of embodied carbon.

### **3.7 *Emergency Power***

The proposed building will function as a secondary emergency response centre. As such, emergency power has been included in the design, and scaled to allow for 72 hours of emergency lighting throughout the facility, with heating/cooling and plumbing operation for the atrium and support spaces. The project team are also actively consulting with the City's risk management team, to ensure the facility has the appropriate storage provision to support its function as a secondary emergency response centre.

### **3.8 *Class C Project Costing***

A Class C total project cost estimate has been developed based on the schematic design. Class C estimates are typically +/- 15% in accuracy with many variables influencing the final construction price, including most importantly the final design, specifications, market activity at the time of construction, and contractor bid proposals. Based on the schematic design to-date, a total project cost of \$180,000,000 has been estimated, which includes all construction costs, contingencies, professional and consulting fees, connection fees and permits, furnishings fixtures and equipment, and excludes land costs and general sales tax.

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### 3.9 Project Schedule

An updated project schedule has been produced based on the schematic design developed to-date, and is summarized below:

Milestone	Date
Council Approval of Phase One Work and Phase Two Funding	Feb 2020
Detailed Design and Tender Documents	Mar 2020 – Q2 2021
Council Approval of Detailed Design and Construction Funding	Q2 2021
Tendering	Q2 2021 – Q3 2021
Construction and Commissioning	Q3 2021 – Q3 2024

### 4.0 PROJECT BUDGET / FINANCING

Phase two of the BLAA project (BAX.0017) will be included in the 2020 – 2024 Provisional Financial Plan, with a total plan of \$158 million over 5 years. See Table 1 below:

Year	2020	2021	2022	2023	2024
Planned Funds	\$6 M	\$17 M	\$40 M	\$48 M	\$47 M

The following is a cost summary of the funding request for the phase two work program, which is comprised of consulting services and project management fees, permitting and development fees, and funds for some advanced preliminary site servicing and off-site costs.

Consulting Fees	\$ 9,500,000
Specialty Consulting and Project Management Fees and Project Contingency	\$ 1,400,000
Permitting and Development Fees	\$ 3,000,000
Site Servicing and Offsite Costs (including design)	\$ 4,100,000
<b>Total:</b>	<b>\$ 18,000,000</b>

In total, \$18,000,000 of Community Benefit Reserves are requested in order to complete the phase two work program for the BLAA project, which will be undertaken over the course of 2020-2021. Sufficient Community Benefit Reserves are available to finance the phase two work. It is noted this amount includes consultant contract administration services; however, should the project not progress to construction, the lead consultant would not be compensated for contract administration services.

### 5.0 RECOMMENDATIONS

The phase one scope of work for the BLAA project is complete. In order to advance the project into detailed design, and fund City development approvals, tender documents, and preliminary site servicing and offsite costs, it is recommended that the Financial Management Committee recommend Council to authorize the advancement of the BLAA project into detailed design, and authorize the use

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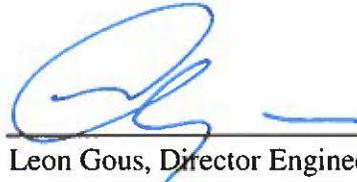
of Community Benefit Reserves in the amount of \$18,000,000 to finance the phase two scope of work for the BLAA project, as outlined in this report. Subject to Council approval of phase two funding, a second report will be advanced to Council, recommending an award of contract for consulting services for the phase two scope of work.

At the completion of the phase two scope of work, which includes all work up until tendering of the project for construction, a further report will be advanced to Committee and Council for approval of the detailed design, as well as funding approval for construction.

It is further recommended that a copy of this report be forwarded to the Parks, Recreation and Culture Commission for information.



E.W. Kozak, Chair, Major Civic Building Project  
Coordination Committee



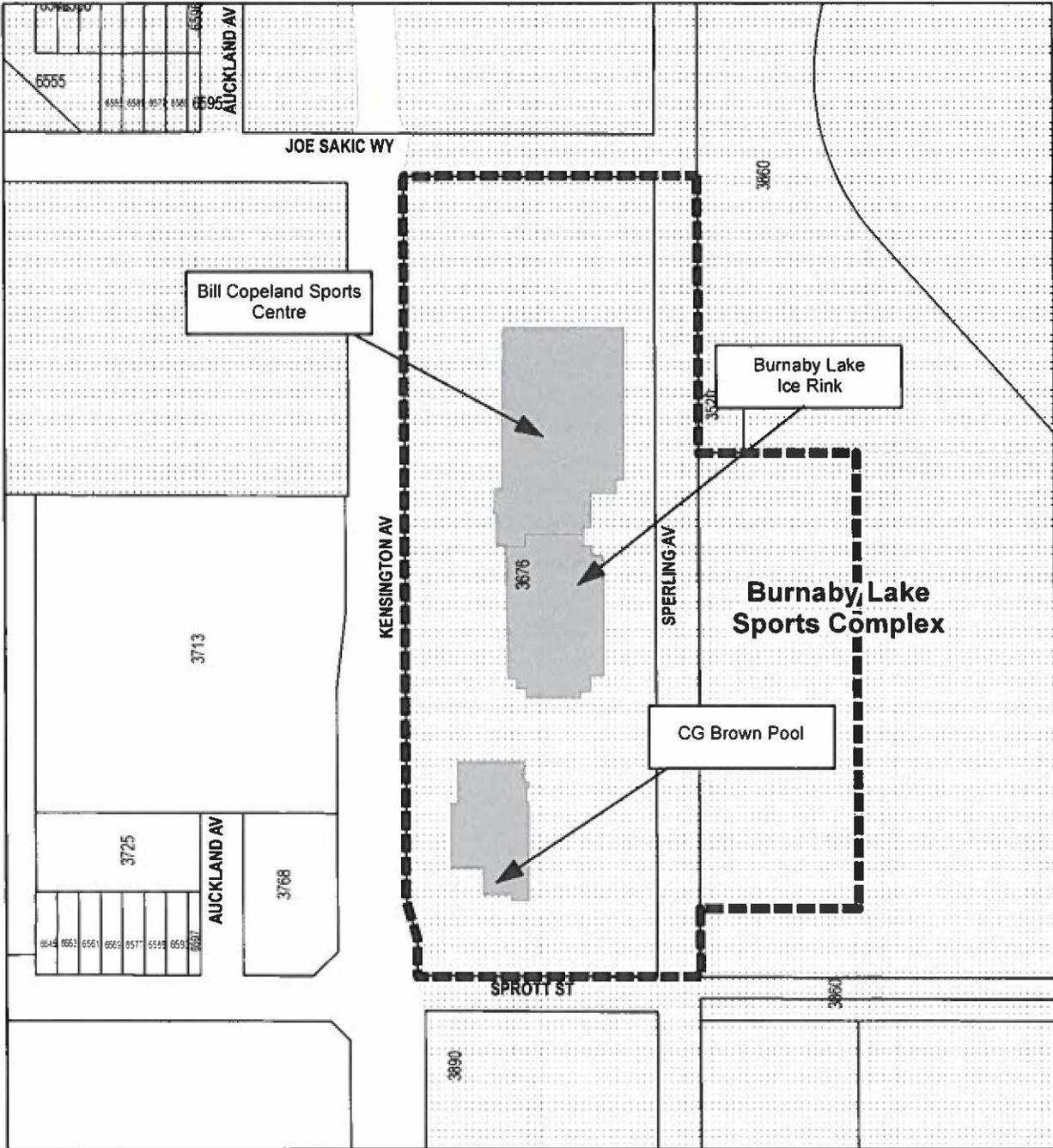
Leon Gous, Director Engineering



Dave Ellenwood  
Director Parks, Recreation and Cultural Services

MN/sla  
**Attachments**

cc: City Manager  
Director Corporate Services  
Director Finance  
City Clerk  
Director Public Safety and Community Services  
Purchasing Manager  
City Solicitor



PLANNING & BUILDING DEPARTMENT



Date:  
JAN 30 2020

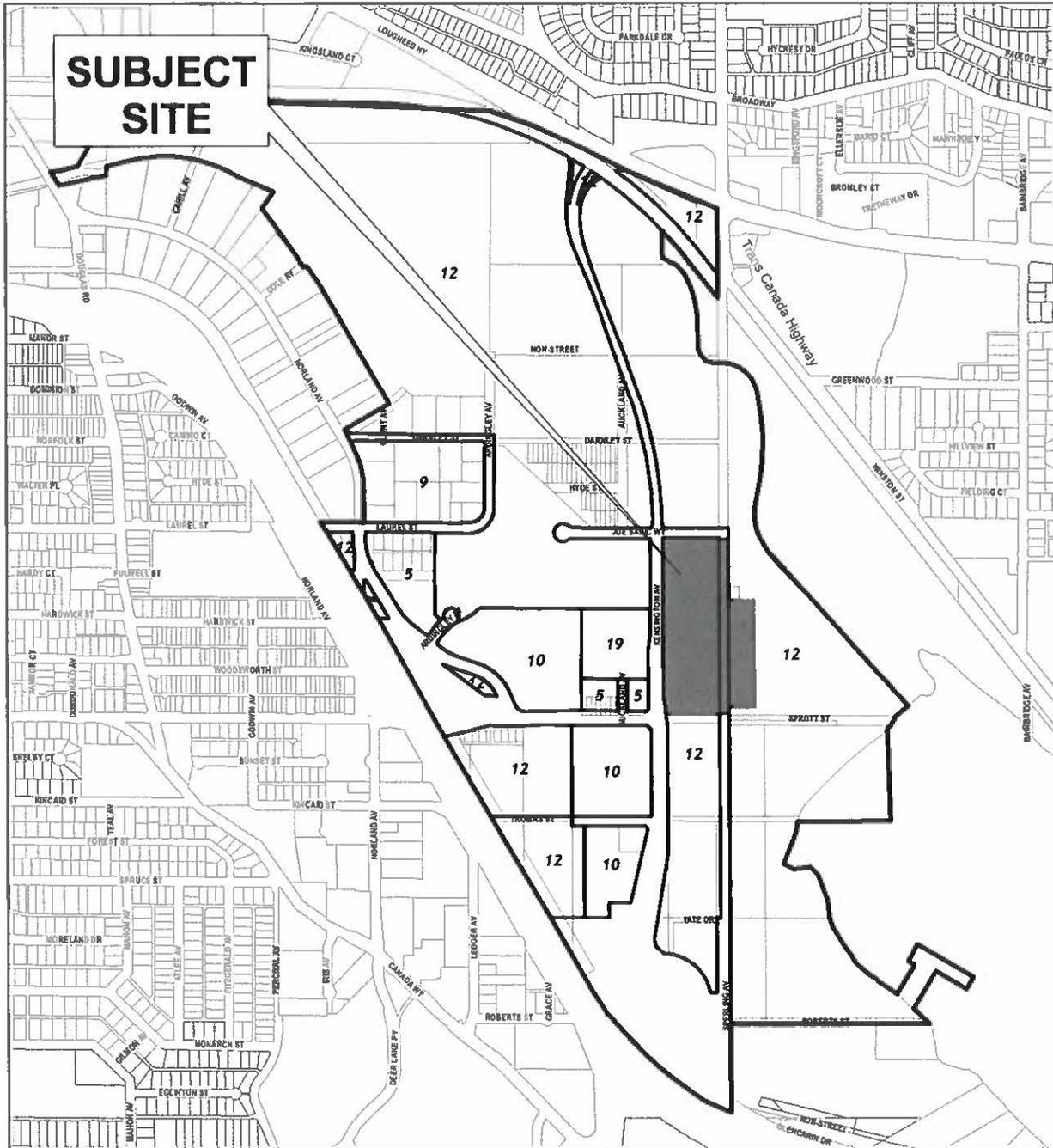
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JS

3676 KENSINGTON AVENUE

 Proposed Development Site

 Park Site



**Burnaby Lake Sports Complex  
Community Plan**



PLANNING & BUILDING DEPARTMENT

- 5** Commercial (Private Development)
- 9** Industrial
- 10** Institutional
- 12** Park and Public Use
- 19** Institutional Mixed Use



1:13,500