

BOARD OF GOVERNORS**Agenda Item: EVENT CENTRE (ARENA) PROJECT – AMENDED BOARD 2 APPROVAL****ACTION REQUIRED:**

This item is presented for decision.

BACKGROUND:

At the June 22, 2021 meeting, the Board of Governors passed the following motion:

THAT the Board of Governors, on the recommendation of the Capital Projects and Facilities Committee, approve the advancement of the University Arena project to the Implementation Phase with an expenditure not to exceed \$21.6M for construction of the base arena building with the supplemental elements (Board 2 Approval).

Over the past year, changes have been made to the project design to improve the operations and functionality of the space. The changes will enable the building to be used for a wider variety of applications while improving community safety and accessibility. Based on these enhancements, the project is now being referred to in documentation as the *Event Centre*, rather than the *Arena*.

Due to several factors, including scope and design changes coupled with escalating costs of construction, the project cannot be completed within the original budget approved in 2021. Following the Capital Projects and Facilities Committee's approval of the motion to recommend the project in the June 16, 2022 meeting, the updated Event Centre (Arena) project is being presented for revised Board 2 approval.

Enclosed:

- Memorandum to the Board of Governors (June 20, 2022)
- Project overview presentation, updated from CPFC (June 20, 2022)
- Memorandum to CPFC re: Escalating Construction Costs (June 16, 2022)

MOTION:

THAT the Board of Governors, on the recommendation of the Capital Projects and Facilities Committee, approve the expenditure of a sum not to exceed \$36.5M for construction of the Dalhousie Event Centre (Amended Board 2 Approval).

**Board of Governors
Dalhousie Event Centre – Implementation Phase (Amended Board 2) Approval
June 2022**

Project Sponsor – Vice President, Finance and Administration

Project Contacts – AVP, Facilities Management / Executive Director, Athletics & Recreation

Project Purpose - To build a new multi-use arena facility on the Studley Campus that addresses the ice needs of student recreational programming (intramurals and clubs), varsity athletics, and community use that includes faculty and staff. Featuring an NHL-sized ice sheet with an alternate floor surface, a state-of-the-art physiotherapy clinic, event spaces with catering capacity, the facility will be an inclusive space that serves the diverse needs of the Dalhousie and greater Halifax communities.

Previous Approvals

The Dalhousie Board of Governors, on the recommendation of the Capital Projects & Facilities Committee, approved advancing the Event Centre project to the Implementation Phase (Board 2 Approval) with an expenditure not to exceed \$21.6M for construction of the base arena building with supplemental elements on June 22, 2021.

Note: in the 2021 Board 2 approval, the project was referred to as the "University Arena" project. The current building design allows for a wider scope of uses beyond an arena. As such, the project is now called the Dalhousie Event Centre.

Background

- At the time of the June 2021 Board 2 approval, the total project cost for the base arena project was estimated at \$19.5M. Supplemental elements beyond the base arena project brought the total project cost to \$21.6M. Supplemental project elements included: Alumni Crescent re-alignment, a new surface parking lot, sustainability elements, removable floor covering for events while keeping the ice in place, and arena seating.
- Following the Board approval, Dalhousie retained professional design services to complete the design process – the prime architect is ABCP Architects from Quebec City in association with local design firm FBM. Dalhousie's Owners Engineer IB Storey remains in place to provide ice plant expertise. The project is proceeding through the Implementation Phase through construction management services provided by EllisDon.
- The design development stage is now complete and cost estimates for the project are considerably higher than what was approved in June 2021. The total project cost is now estimated at \$36.5M. There are a series of reasons for this considerable cost increase:
 - We have improved the building design for the Event Centre. Adjustments include public circulation around ice, increased washroom count and location including primarily gender-neutral washrooms, more exits, centralized location of the events room, improved site orientation and proximity to South Street, removal of unnecessary floor-level changes, visibility of the main stair circulation, and additional dedicated access to referee dressing room. The exterior envelope was simplified, and accessibility improved

with a much better location for the Zamboni room. However, code requirements that apply to events hosting applications beyond an ice-rink, only, have increased complexity for fire protection.

- The Board 2 approval budget was based on a 57,722-sf building. We have since established there was an error in the area take off and the building design was 68,921-sf, which is an 11,199-sf increase in size. Using Altus cost guide, this represents a cost differential of approximately \$2.9M. Over time the Event Centre design has optimized space due to circulation improvements. The current Event Centre is 71,860-sf, which is 24% larger than previously reported.
- Campus Infrastructure costs – detailed design revealed site electrical relocations were required, as well as mechanical and electrical modifications/relocations to Studley Gymnasium due to demolition of the old arena operator room and Zamboni station. These campus infrastructure costs were previously unknown and have added to the project cost. A portion of the mechanical and electrical modifications/relocations are in the category of facilities renewal, and hence will be funded through the facilities renewal budget.
- A major change to the ice plant was based on lessons learned after visiting several other stadiums. We have moved away from an ammonia-based ice plant to a Gen II Plant-R513a with increased dehumidification and a reflective ceiling, which will contribute to higher quality ice. The change will reduce energy consumption, be more environmentally friendly, and improve community safety, as a Gen II Plant-R513a does not require toxic chemicals and oils. Additionally, the removal of these toxic materials eliminates the regulatory requirement for a full-time plant engineer. It is expected that insurance costs may be reduced in the future for clients with such plants, though these cost reductions were not factored into the current operational budget.
- Price escalation across the board; all costs associated with capital projects have risen substantially due to global supply chain problems and increased demand. Costs for building materials, professional services, equipment, and insurance have all increased. Altus Canadian Pricing Index shows construction cost estimates increasing from \$250 to \$360 per square foot for Halifax zone over the past 1-2 years.

For example, a steel quote in May 2021 was revised after the budget was passed through Board 2 approval in 2021, resulting in a cost increase of \$530,000. The price of steel has continued to increase substantially due to global market conditions. Recent cost estimates are carrying \$4.4M for structural steel and miscellaneous metals, whereas our previously provided cost estimate from our industry partner was \$2.4M.

Resource Implications and Funding Plan

Project Capital Budget

The total project cost for the Event Centre project is \$36.5M

Capital & Operational Funding

The updated funding plan for the \$36.5M Event Centre project is indicated in the table below.

Base Project Funding– Event Centre	
Earmarked Dal funds from 2012	\$5.95M
Athletics & Recreation carry forward contr.	\$1.8M
2021-22 YE Surplus appropriation	\$1.75M
FR contribution	\$1.5M
Additional Dal funds	\$3.0M
Lead Donor (confirmed)	\$5.0M
Other fundraising*	\$5.0M
Debt funded	\$12.5M
Total	\$36.5M

Base Project Funding– Arena (June 2021)	
Earmarked Dal funds from 2012	\$5.0M
Athletics & Recreation carry forward contr.	\$1.0M
Additional Dal Funds	\$3.0M
Debt funded	\$12.6M
Total	\$21.6M

**A lead donor has been secured with a signed gift agreement in place for \$5 million. Beyond that, there are a variety of other funding opportunities that include the Dalhousie Physiotherapy Clinic, event room, warm lobby area, dressing rooms, seats and alumni which could attract additional fundraising revenue in the range of \$2-5M. Furthermore, the arena will be included in Dalhousie's new capital fundraising campaign as the lead priority for Athletics & Recreation. Alternative funding sources will be identified to cover any fundraising shortfalls with additional debt financing as the last resort.*

Annual operating costs for the event center will be supported by rentals, currently estimated to be at 40% of available inventory, a fitness center fee contribution that will increase with enrolment growth, and the redeployment of budget dollars currently being expended to support ice-related programming. The expected annual contribution from operations is currently forecasted to range from \$750K to \$825K, which will be sufficient to service the debt portion of the arena funding.

Issue(s)

- **Disruptions** – As the Event Centre project proceeds through the Implementation Phase there will be disruptions to Alumni Crescent traffic flow directions for the purposes of constructing the surface parking lot and the Event Centre. Additionally, noise disruption to the adjacent LeMarchant Place will occur during construction. Neighbours are also concerned about noise. Dalhousie notices will occur to the general Dal community as well as the residence. A community information session will occur in the coming months.

Risks

- **Fundraising / Capital Campaign:** Raising the capital cost necessary to complete the Events Centre is a known risk particularly around anticipated project delivery timelines. The debt funding is sustainable should fundraising not be successful although donors are expected to support the capital cost as noted.
- **Concerns remain for cost fluctuations and major equipment delivery:** We have engaged a shadow cost consultant to verify estimates of the Construction Manager. To overcome some delivery issues will require early major equipment supply tender. Standard project contingency costs have been built into the budget, per usual.

- **Neighbour relations:** In the coming months, Dal will host an open gallery at the adjacent LeMarchant Place building to view details and meet the design and construction team. As was done during construction of the Fitness Centre, site activity and noise will be managed through a variety of standard industry and regulatory controls

Project Timeline

Board 2 Approval REVISED	June 2022
Implementation Phase and Occupancy	December 2023 (estimated)

MOTION:

THAT the Board of Governors, on the recommendation of the Capital Projects and Facilities Committee, approve the expenditure of a sum not to exceed \$36.5M for construction of the Dalhousie Event Centre (Amended Board 2 Approval).

TO: Capital Projects and Facilities Committee

FROM: Peter Coutts, Assistant Vice-President, Facilities Management

DATE: June 15, 2022

SUBJECT: Background on construction cost pressures

The purpose of this memo is to provide context on rising construction costs, as reflected in several of Dalhousie's capital projects, both planned and in-progress.

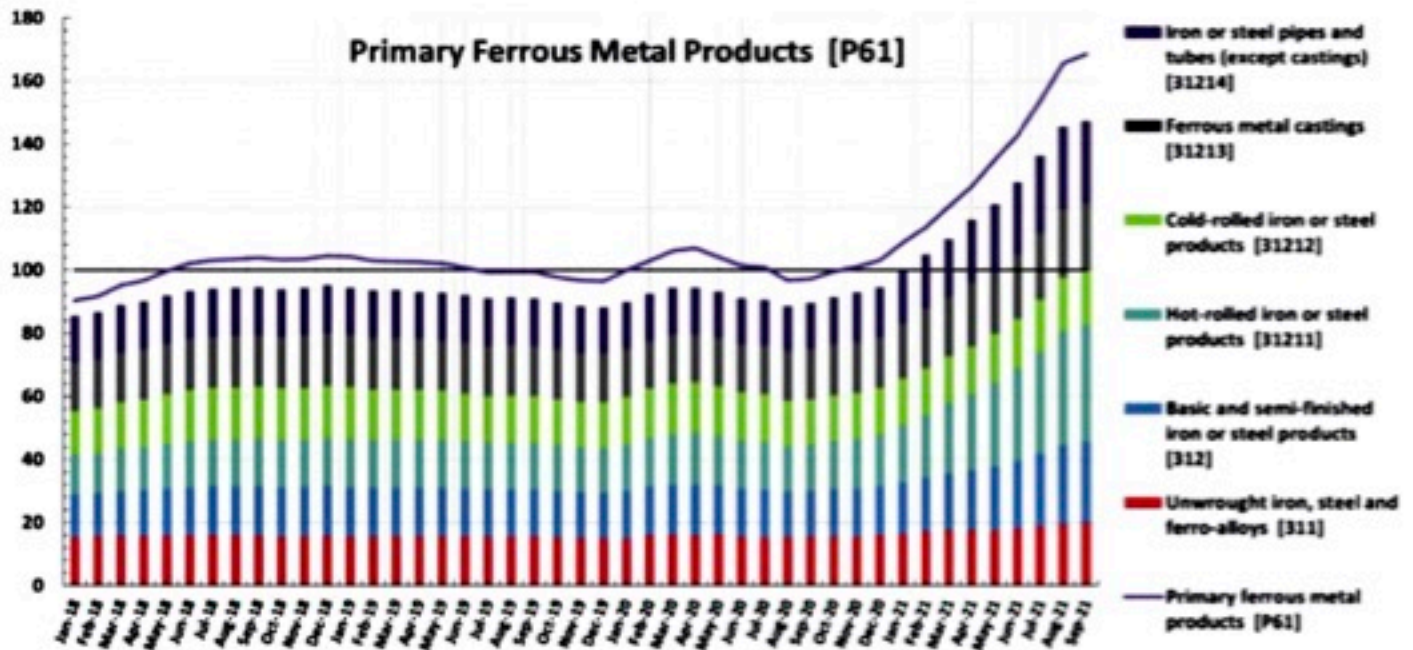
Construction costs have increased significantly during 2021 and early 2022, with price escalations far exceeding inflation rates in Canada and globally. Market volatility continues across many of the industry factor inputs as unanticipated shocks occur to both supply and demand.

Per industry consultant Altus Group, "The Canadian construction industry demonstrated remarkable resilience in 2021, with construction activity in many cities reaching or exceeding pre-pandemic levels. [...] High demand, broken supply chains, volatile commodity prices and persistent labour shortages have conspired to create a perfect storm of rising costs and decreasing predictability" (Altus, 2022). Altus Group's 2022 Canadian Cost Guide shows a basic arena cost estimate in Halifax at \$290-\$340 per square foot, an increase of ~40% from the 2020 estimate of \$200-\$250 per square foot.

The table below shows the year over year percentage increases for several key construction inputs as reported by the US Bureau of Labour Statistics Producer Price Indexes.

Construction Product	% Increase April 2021 to April 2022
Gas fuels	106 %
Asphalt	49 %
Plastic sewer, storm drain & water main pipe	52 %
Concrete pipe	21 %
Millwork	20 %
Iron & Steel	25 %
Steel pipe & tube	55 %
Nonferrous wire & cable	23 %
Heating equipment	20 %
Sheet metal products	28 %
Structural, Arch & Pre-Engineered metal products	47 %
Structural Metal bar joists & concrete rebar	44 %
Asphalt felts & coatings	20 %

The Canadian Construction Association shared the following chart that shows a composite rise in price of iron and steel products close to 50% over the first nine months of 2021. We are experiencing similar local price increases, as evidenced by a near doubling of the cost estimate for structural steel for the Dalhousie Event Centre.



Several local factors in Halifax are further compounding the increasing prices and supply chain bottlenecks: a provincial government push to build housing inventory and other large infrastructure projects combined with a wave of pandemic-related retirements in skilled trades people are creating labour shortages in construction-related fields. Based on the duration of these projects, the outlook suggests pressure will likely be sustained over the next few years.

Local industry associations have not released comprehensive regional construction-related cost statistics. However, anecdotally, we are hearing and seeing local cost increases above national rates for some of the input factors. The following graph shows structural steel prices obtained from a Nova Scotia steel fabrication firm for their recent local projects. This represents an increase of 193% in less than 2.5 years. We are experiencing similar rapid cost escalations on some aspects of Dalhousie’s major capital projects.

Structural steel, cost per pound, Halifax



DALHOUSIE EVENT CENTRE

SEEKING AMENDED BOARD 2 APPROVAL

JUNE 2022



ESTIMATED CAPITAL BUDGET

- ESTIMATED CAPITAL BUDGET IS **\$36.5M** FOR THE EVENT CENTRE FACILITY BASED ON CURRENT ESTIMATES.
- THE PREVIOUS BUDGET APPROVED IN 2021 WAS \$21.6M



ESTIMATED CAPITAL BUDGET - REASONS

- LATE STRUCTURAL STEEL QUOTE BEFORE 2021 APPROVAL
- ERROR IN BUILDING AREA TAKE-OFF — RESULTING IN BUILDING REPORTED AS TOO SMALL
- IMPROVED BUILDING DESIGN
 - 360 CIRCULATION | CENTRALIZED EVENT ROOM | BETTER SITE ORIENTATION
 - INCREASED WASHROOM COUNT | SIMPLIFIED EXTERIOR ENVELOPE
- CAMPUS INFRASTRUCTURE COSTS
- LESSONS LEARNED FROM OTHER ARENAS AND REFRIGERANT TYPE
- PRICE ESCALATION ACROSS THE BOARD



DESIGN RENDERINGS



DESIGN RENDERINGS



BUILDING PLAN

LEVEL 1

- MAIN ENTRANCE FROM SOUTH STREET
- LOBBY AND RECEPTION AREA
- SECONDARY ENTRANCE FROM LEMARCHANT PLACE
- LOCKER ROOMS, OFFICES AND STORAGE FOR MEN'S AND WOMEN'S VARSITY HOCKEY TEAMS
- SIX (6) ADDITIONAL LOCKER ROOMS
- NHL SIZE ICE SURFACE AND FLOOR SURFACE FOR NON-ICE ACTIVITIES

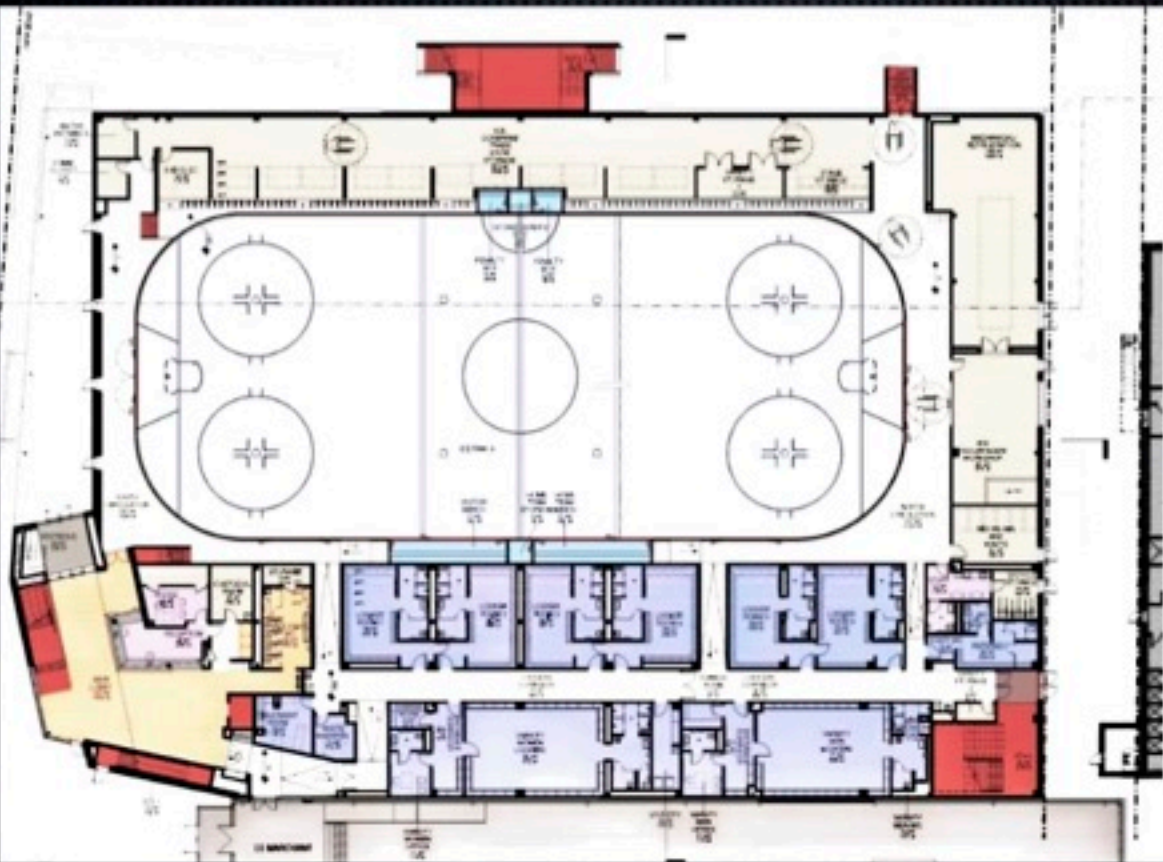
LEVEL 2

- DALHOUSIE PHYSIOTHERAPY CLINIC
- FOOD SERVICES
- WARM LOBBY WITH VIEW OF ARENA
- EVENT ROOM WITH ARENA VIEW
- STORAGE
- ACCESS TO SEATING (936 SEATS)



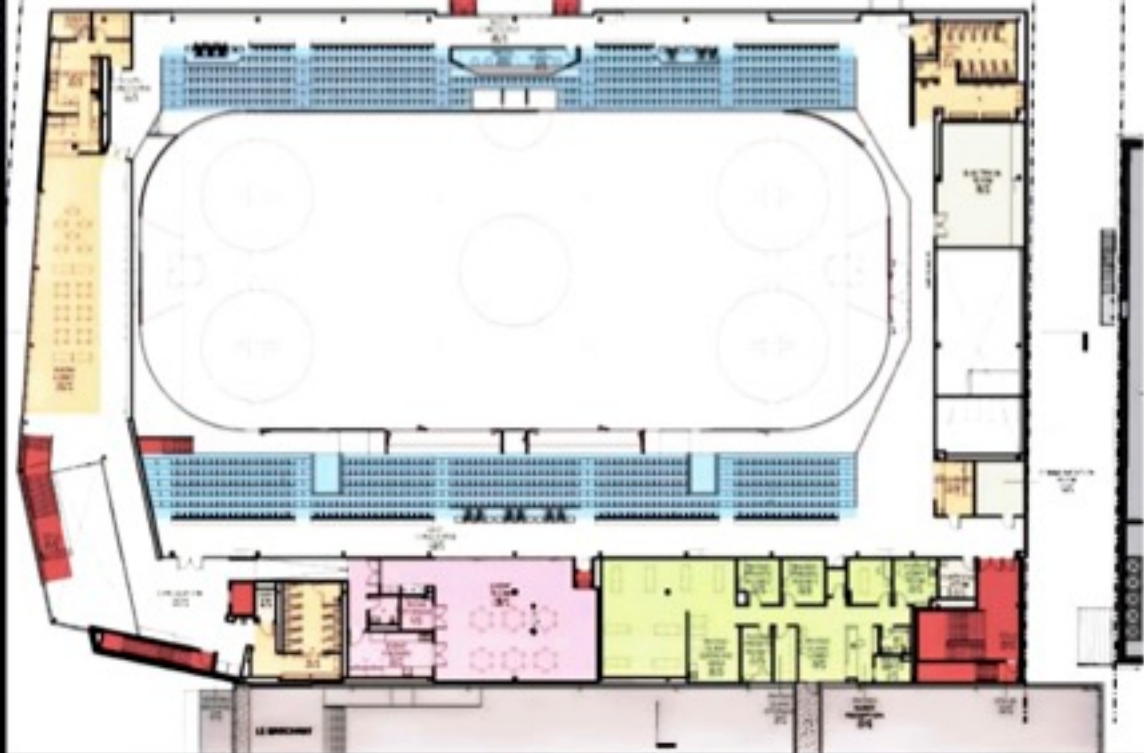


LEVEL 1



- Ice
- Hockey spaces
- Lockers and services
- Administration
- Core space
- Back of house
- Circulation
- Vertical circulation

LEVEL 2



- Ice
- Hockey spaces
- Event spaces
- Core spaces
- Physiotherapy Clinic
- Back of house
- Circulation
- Vertical circulation

CAPITAL FUNDING SOURCES

Investment Streams	Expected Case	Previous Case
Existing Arena Fund	\$5,950,000	\$5,000,000
Athletics & Recreation Contribution	\$1,800,000	\$1,000,000
2021-22 YE Surplus Appropriation	\$1,750,000	\$0
FR Contribution	\$1,500,000	\$0
Additional University Funds	\$3,000,000	\$3,000,000
Lead Donor (Confirmed)	\$5,000,000	\$0
Other Fundraising*	\$5,000,000	\$0
Assumption of Debt	\$12,500,000	\$12,600,000
TOTAL	\$36,500,000	\$21,600,000

Expected Case: \$12.5 Million in debt, 3.50% quoted for June 2023, repaid in no more than 25 years
*Alternative funding sources will be identified to cover any fundraising shortfalls with additional debt financing as the last resort.



PROPOSED MOTION

THAT THE BOARD OF GOVERNORS, ON THE RECOMMENDATION OF THE CAPITAL PROJECTS AND FACILITIES COMMITTEE, APPROVE THE EXPENDITURE OF A SUM NOT TO EXCEED \$36.5M FOR CONSTRUCTION OF THE DALHOUSIE EVENT CENTRE (AMENDED BOARD 2 APPROVAL).