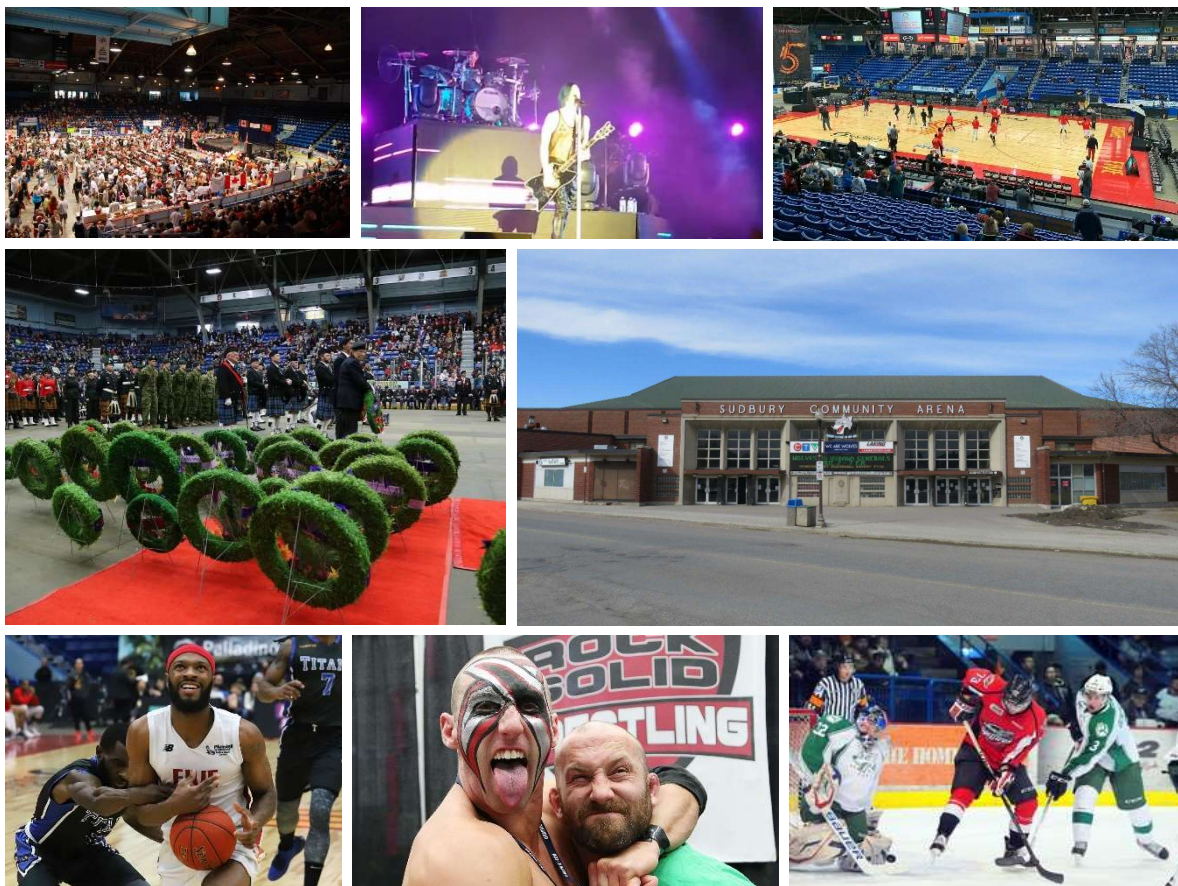


Assessment Study for the Expansion of the Sudbury Community Arena



Ian McKay Architect Inc.
WT Partnership
May 31, 2021



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Renovation & Expansion Program Cost Plan

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Assessment Study for the Expansion of the Sudbury Community Arena

1 Executive Summary

The City of Greater Sudbury is reviewing the details and outcomes of the proposed development of a new Sports and Entertainment Centre. The project has experienced a significant delay due to appeals to the Local Planning Authority Tribunal regarding the rezoning of the selected Kingsway Site. Given the delay, City Council has directed staff to update all the original information on the project, including the option of renovating and expanding the existing Sudbury Community Arena (SCA) so that it could more closely meet the performance criteria of a new Sports and Entertainment Centre as described and outlined in the draft Design/Build Request for Proposals developed in 2018.

The Terms of Reference for the current review includes the following:

- Determining the cost to renovate and expand the SCA so that it has the same features and performance outcomes of a new Sports and Entertainment Centre as outlined in the 2017 PwC Business Case,
- Identify shortcomings in the expansion that do not comply with the Program of Spaces in the current Design/Build Request for Proposals,
- Provide an option that allows the facility to continue to operate, at least as a venue for the Sudbury Wolves and Sudbury Five, during the construction process, and identify any additional costs associated with that phasing process.

Ian McKay Architect Inc. (IMA) developed a Concept Design driven by the Program of Spaces and worked with the estimating firm of WT Partnership to prepare the Program Cost Plan. In preparing the Concept Design, IMA determined the following:

- Expansion of the facility for back-of-house functions to the north was reasonably straight-forward, and the facility would be able to accommodate the same range of events as a new facility,
- Expansion of the concourse was not difficult from a constructability perspective but since the concourse would need to expand on all four sides, there would be an issue regarding property lines relative to both Grey and Minto Streets,
- The location of the existing main span structure and in particular the triangular truss columns made the expansion of the seating bowl difficult in terms of sightlines – an ongoing issue with the SCA,
- The existing seating bowl does not meet current expectations from a fan or patron perspective – IMA is proposing a new metal bowl “liner” to be installed over the current concrete one allowing for additional seats, increased row-to-row spacing, and a more intimate relationship between fan and field-of-play,
- In terms of revenue-generating components in the Program of Spaces, the Concept Design had the following features:
 - the target of 35 points of sale (cashiers) will be easily achievable on the Concourse Level and there is sufficient space for an additional 15 temporary points of sale,
 - even with additional seating rows the overall seating bowl capacity (excluding club seats) will be 4,850 versus 5,020 identified in the Program of Spaces,
 - the new seating bowl will have retractable seating at one end allowing for the end-stage to be located to minimize behind-stage seating loss – this is equal to the standard for new facilities,
 - total club seating capacity will be 150 versus 500 identified in the Program of Spaces,
 - total number of 4-seat loge boxes is 13 versus 10 identified in the Program of Spaces,
 - total number of suites is 12 regular size with 2 rows of 5 seat maximum in front of the suite – the Program of Spaces identifies 8 small suites with 2 rows of 4 seats, 8 regular suites with 2 rows of 5 seats, and 8 large suites with 2 rows of 6 seats. There are no Suites Level lounges or party rooms as part of the Concept Design,
- It would be possible to renovate and expand the SCA so that it can continue to accommodate the hockey and basketball leagues during construction. However this would have a significant impact on the project schedule and result in three seasons of sports being played in a facility under construction.

Schematic Schedule



Summary of Areas

The Concept Design summary of new and renovated areas is as follows:

- **Total Floor Area of Expanded Arena** 191,857 ft²
- New Floor Area 92,273 ft²
- Renovated Floor Area 72,326 ft²
- New Seating Bowl Insert 27,258 ft²

Renovation & Expansion Program Cost Plan

The Program Cost Plan was developed by the WT Partnership and identifies the cost of construction for all activity on the site bound by Brady Street, Grey Street, Elgin Street and Minto Street. The Program Cost Plan was then expanded to include architectural and engineering fees as well as specialty consultants. While the Concept Design expands west onto the sidewalk on Grey Street and east onto Minto Street, any impact on City services or infrastructure related to this expansion are not included.

The Program Cost Plan was developed as a single phase of construction and assumes a design/bid/build approach. The program of spaces is based on the requirements identified in the PwC report of 2017. The option of phasing the project has been explored to maintain the Sudbury Wolves and Sudbury Five seasons and notes the following:

- the phasing of the project as outlined in the Schematic Schedule above,
- relocating of the Contractor's offices and construction area to the south side of the facility once Phase 1 is complete,
- the construction of temporary facilities to accommodate concourse-level exiting during construction of Phase 1,
- while Phase 2 may be part of the scope of work for the overall project, the Contractor may not be prepared to finalize a price until Phase 1 approaches completion.

The Program Cost Plan has identified the following project costs:

Single Phase of Design and Construction

- Total construction cost for Community Arena expansion \$102,639,993
- Total cost for site development \$2,307,865
- Total construction cost \$104,947,858
- Architectural, engineering and specialty fees at 10% \$10,494,786
- **TOTAL PROJECT COST FOR SINGLE PHASE PROJECT** **\$115,422,664**

Single Phase of Design and Two Phases of Construction

- Total construction cost of Phase 1 \$71,236,218
- Total construction cost of Phase 2 with escalation and additional expenses \$34,150,399
- Cost of site development increased by 5% \$2,423,260
- Total construction cost \$107,809,877
- Architectural, engineering and specialty fees at 10% \$10,780,988
- **TOTAL PROJECT COST FOR A TWO PHASED PROJECT** **\$118,590,865**

2 Background

In July of 2016 the City of Greater Sudbury engaged PricewaterhouseCoopers LLP (PwC) to develop a Market Analysis and Business Case Assessment for a new Arena/Event Centre. In addition to the business case, the assignment included:

- A recommendation of a preferred site for a new Arena/Event Centre,
- Issuance of an Expression of Interest for the design/build delivery of a new Arena/Event Centre,
- A review of the submissions and the preparation of a shortlist of design/build teams,
- The preparation of a Request for Proposals to be issued to the shortlisted firms.

The Request for Proposals included contractual/legal requirements as well as a section on **Design and Process Requirements** including:

- Planning and Design Commentary,
- Process,
- Program of Spaces,
- Specification Criteria,
- Design/Build Submission Requirements.

The Request for Proposals captures both the qualitative and quantitative expectations of the City, and defines the project.

In the past the City has considered the expansion of the Sudbury Community Arena, most recently in February of 2015. This study, prepared by CBRE in association with MJMA, proposed a building program that would include:

- total area of 171,000 square feet,
- 68,500 square feet of new construction,
- 46,600 square feet of renovated space,
- cost range between \$44,236,610 and \$50,000,000.

The CBRE/MJMA proposal cost excluded items such as development and land transfer fees, site plan approval, removal of hazardous material, removal of underground services, and additional charges for either accelerated or phased construction.

In late 2020 the City was presented with an unsolicited proposal to renovate and expand the Community Arena, and in this instance there was a suggestion that this new concept would capture to a large extent the Program of Spaces identified in the Design/Build Request for Proposals. This concept, titled projectNOW and prepared by Third Line Studio would include:

- total gross floor area of 138,000 square feet,
- 65,107 square feet of new construction,
- 50,528 square feet of renovation,
- cost of \$55,551,000.

It does not appear that soft costs (consulting fees) or Fittings + Equipment were included in the proposed cost.

The terms of reference for the current study aims to determine expansion and renovation costs required to provide the Community Arena with, to the best extent possible, the features of a newly constructed multi-purpose arena. Specific initiatives in developing the cost estimate include the following:

- incorporate to the best extent possible the Program of Spaces identified in the Request for Proposals,
- create the same level of value as described in the Request for Proposals so that revenue generation for enhancements such as private suites, loge boxes, and club seats approach those of a new-build,
- develop a back-of-house component that has the capacity to efficiently accommodate current entertainment market demands,
- incorporate a new services infrastructure (electrical, plumbing, mechanical systems) so that replacement of building components in the renovation/expansion would be equal to a new-build.
- Evaluate the feasibility of phasing construction so that the sports franchise teams would not lose a season during the expansion process.

3 Process

The IMA team developed a Conceptual Design of components based on the Program of Spaces in the Request for Proposals. This was critical in determining the potential capacity of an expanded Community Arena in terms of:

- General seating capacity,
- Number of private suites and the number of dedicated seats in front of the suite,
- Number of loge boxes and their capacity,
- Number of club seats.

This information would be critical in evaluating the expansion relative to the Business Case originally prepared by PwC.

The Conceptual Design for the expanded Community Arena differs from previous studies and concepts in a number of fundamental ways:

1. The concept design is driven by the Program of Spaces that will be incorporated into the new facility on the Kingsway Site,
2. The concept design and pricing recognize that a major expansion requires building systems that are new, consistent with what would be delivered in the facility planned for the Kingsway Site,
3. While previous approaches to expanding the Community Arena have been centred around maintaining the existing roof structure and seating bowl, the IMA concept design makes a dramatic change to the seating bowl to correct for significant compromises, and substantially enhance the spectator experience,
4. The development of a properly functioning top-fed seating bowl and appropriately-sized concourse necessitates that the building expand to both the east and the west.

The planning and design of any spectator facility starts with an immediate consideration of the seating bowl. Facility designers and operators will look at a configuration that best supports the business case, the main sports franchise, and the overall event calendar. There are several options for a new facility including:

- **Bottom-Fed Bowl** where typically the concourse is at the same level as the ice surface. In this configuration the concourse wraps around three sides of the bowl (two long sides and one short side) and the fourth side is for all the back-of-house services. With both the circulation and the back-of-house being at the same level, the bottom-fed approach tends to require more site for the facility. Access to the bowl is through gates or portals at the bottom of the seating bowl.

See image to the right



- **Top-Fed Bowl** typically with an open concourse. This is the most common approach for facilities in the range of 6,000 fixed seats or less, and is the format for the GFL Memorial Gardens in Sault Ste. Marie.

Image to the right



- **Mid-Level Concourse** where most/all of the seating is accessed through gates penetrating the seating bowl. This approach can be used for a facility with 6,000 fixed seats but is better suited to facilities with an excess of 7,000 fixed seats.

Not shown

The Sudbury Community Arena is a hybrid with spectators moving through the entry on stairs up to a very narrow concourse. Most of the circulation space is at the lower ice level which is also the location for all washrooms and most concessions. The most appropriate improvement to the circulation within an expanded Community Arena would be to maintain the current pattern of moving through the lobby and up the main stairs to a larger concourse sized to accommodate all spectators. This approach is typical of previous concept designs for the expansion of the facility and requires the building to expand in all four directions.

The Concept Design developed by IMA for pricing an expanded Community Arena is illustrated in the schematic sketches on the following pages.

Event/Entry Level

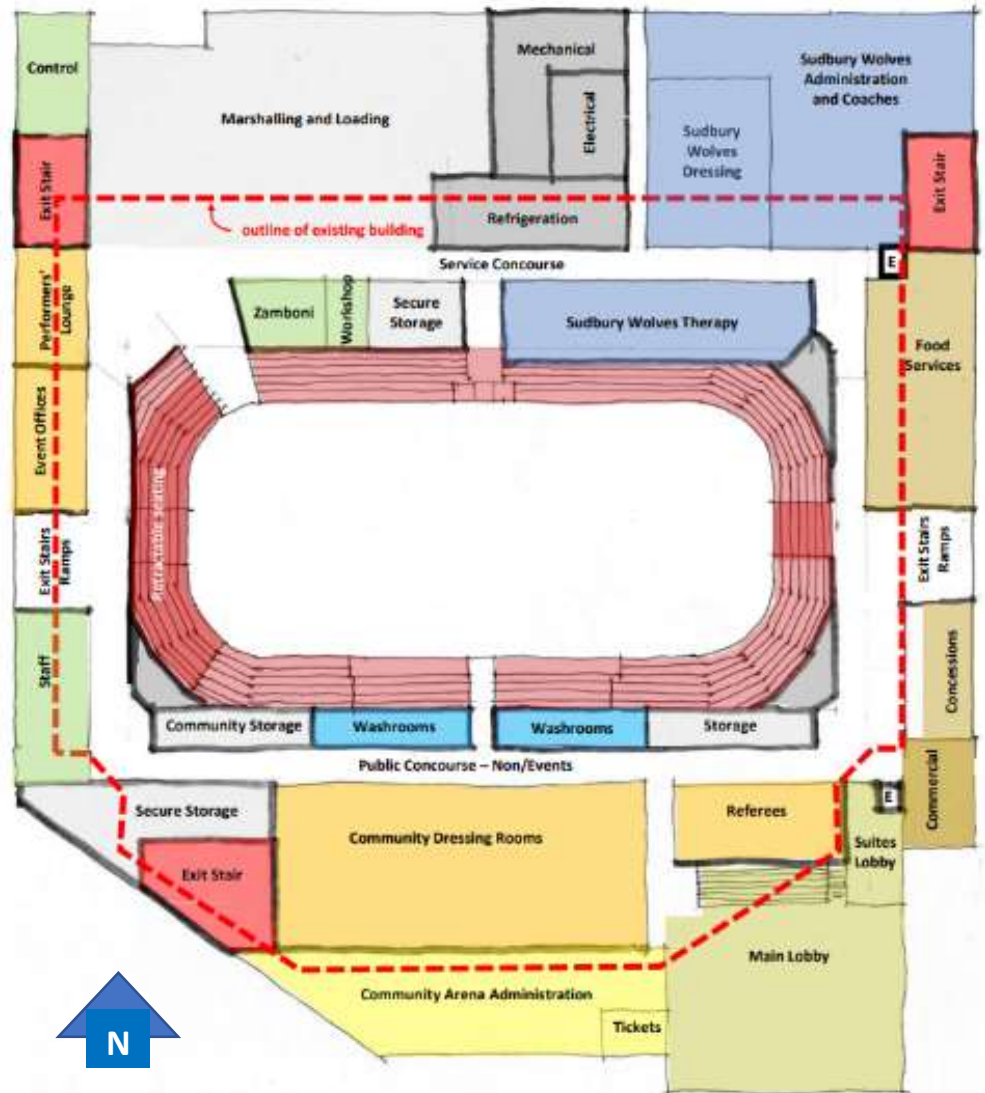
The Concept Design maintains the current approach of entering the building on the south side at grade and ascending by a main staircase to the seating bowl above. The lobby continues to provide access to the dressing room level a half level below. This is the main similarity between the Concept Design and the existing facility and is consistent with other concepts prepared by other design firms.

The Concept Design features at the entry level:

- A Main Lobby moved to the south east corner and incorporating both a Suites Lobby and an elevator,
- An Administration Area off the Main Lobby,
- A stand-alone Commercial Space directly east of the Suites Lobby.

Moving from the Main Lobby down a ramp to the Event Level are:

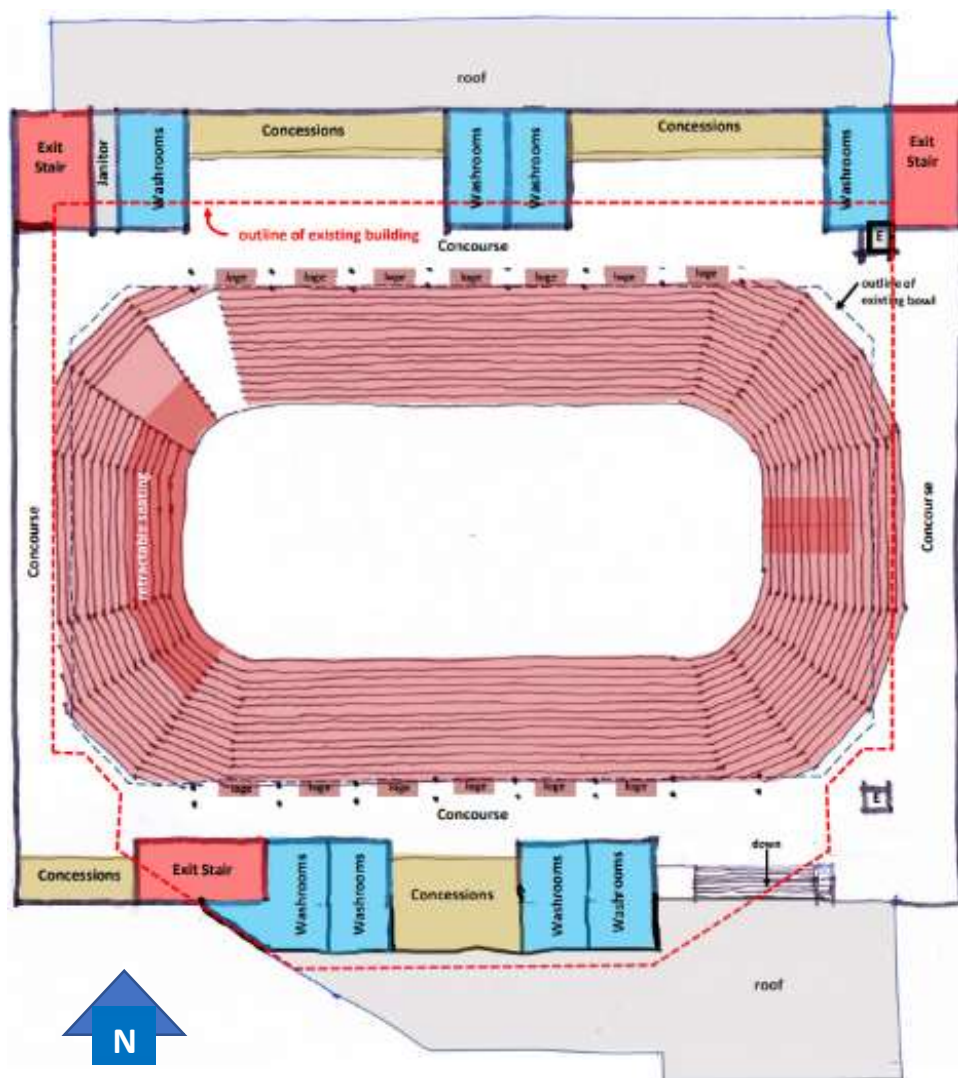
- 4 regular Community Dressing Rooms and 2 oversized Dressing Rooms,
- 2 Referee/Multi-Purpose Charge Rooms,
- Washrooms and a Concession for use for community programs as well as concerts and other events with seating at the ice level,
- Secure storage for both the community and the facility,
- A major Food Services component with elevator access to both the Concourse Level and Suites Level,
- The Sudbury Wolves Hockey Team “suite” in the northeast corner including Administration, Dressing Room, Coaches, and Therapy/Training area,
- Centrally located mechanical and electrical spaces with the Refrigeration Room remaining essentially where it currently exists,
- Major Marshalling area which provides vehicular access to the ice slab as well as storage for a portable stage, 1,500 folding seats, 100 circular tables, portable basketball floor and hoops, ice covering, and rinkboard and glazing storage,
- A west side expansion that includes a Control Area (with glazing to the loading area), Performer and Event Office space, and a Staff area,
- 6 rows of retractable seating at the west end of the bowl to allow for optimizing the stage location for end-stage concerts (minimizing “killed” seats behind the stage and maximizing seats on the floor).



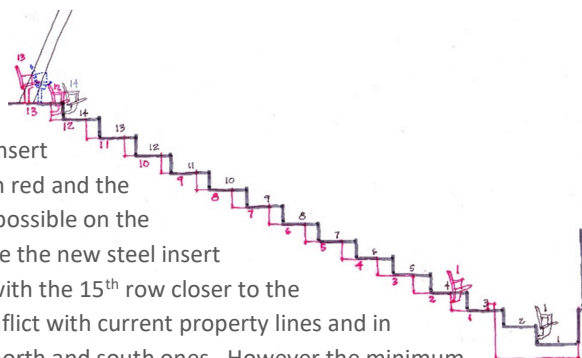
Concourse Level

The Concourse Level can be described as the “public domain” in a spectator facility. The Concept Design provides the following for this level:

- Easy flow of patrons – including a main stair, escalator, and elevator, from the Main Lobby to the Concourse,
- A major expansion of the concourse width as this will be the only means for patrons to access the seating bowl,
- Major exiting stairs at the northwest, northeast and southwest corners – the main stair provides exiting in the southeast corner,
- Washrooms on the north and south sides as required by the Program of Spaces and compliant with the appropriate plumbing and building codes,
- Concessions on the north and south sides with points of sale in excess of the requirements identified in the Program of Spaces and PwC Business Case,
- 2 elevators, one from the Suites Lobby also providing access to the Concourse Level, as well as an elevator from the Food Services area ,
- 13 Loges Boxes, each with a capacity of 4 bar-stool height seats, strategically located between the existing columns to minimize compromised sightlines,
- A total of 5,000 general fixed seats including 150 club seats.



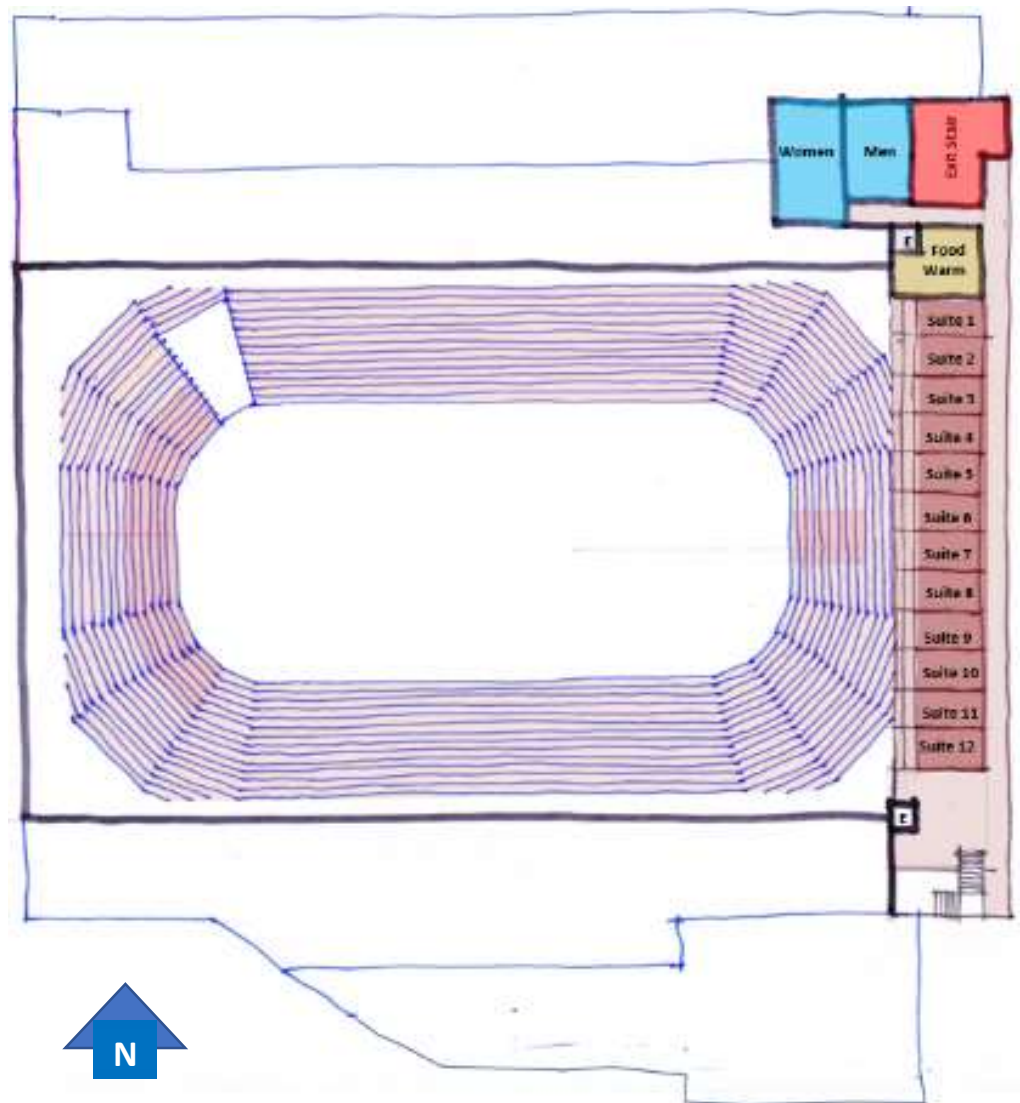
The replanning of the seating bowl provides a significant change to how the Building functions and the quality of the spectating experience. The original concrete bowl will be left in place and a new steel faceted (rounded corners) insert bowl will be installed within. The sketch to the right shows the current bowl in red and the new steel bowl nesting on top. Two additional rows of seats at the bottom is possible on the north and south sides. The row-to-row spacing in the existing bowl is 31" while the new steel insert will have a spacing of just over 32". The new bowl will have 15 rows of seats with the 15th row closer to the ice surface than the current 13th row. The expansions to the east and west conflict with current property lines and in the Concept Design the new concourse on these sides are narrower than the north and south ones. However the minimum concourse width is 4.5 m or 14'-9".



Private Suites Level

The Private Suites component of the Concept Design has been placed at the east end of the Community Arena. Features of this level include:

- Access to the Suites Level is by either a stair or elevator,
- The suites are located to have views to all of the events in the building including end-stage concerts.
- Suites are designed so that the spaces are secure and away from the public domain of the Concourse Level,
- There are a total of 12 suites, each having two rows of seating (a total of 10 seats) in front of the box as well as a counter-height bar with 3 bar stools.
- Each suite has a counter and cabinets on one of the side walls along with an under-counter fridge,
- Each suite can be modified to accommodate wheelchair patrons,
- The Suites Level has a warming kitchen adjacent to the elevator from the Food Services area on the Event Level Floor,
- The Suites Level has one set of women's and men's washrooms.



The Suites Level has a number of compromises:

- All suites are on one side of the seating bowl and while it is more desirable to have suites along the long dimension of the ice pad, the existing main structure of the arena makes this impossible,
- The extent of suites on the east side is limited by the configurate of the main truss structure. The 12 suites shown will have good views of end-stage, centre-stage, and sports configurations,
- The number of suites provided falls far short of the Program of Spaces and the PwC Business Case which identifies:
 - 8 large suites with bar stool seating for 4 as well as 2 rows of 6 seats for front-of-suite seating,
 - 8 regular suites with bar stool seating for 4 as well as 2 rows of 5 seats for front-of-suite seating,
 - 8 small suites with bar stool seating for 3 as well as 2 rows of 4 seats for front-of-suite seating,

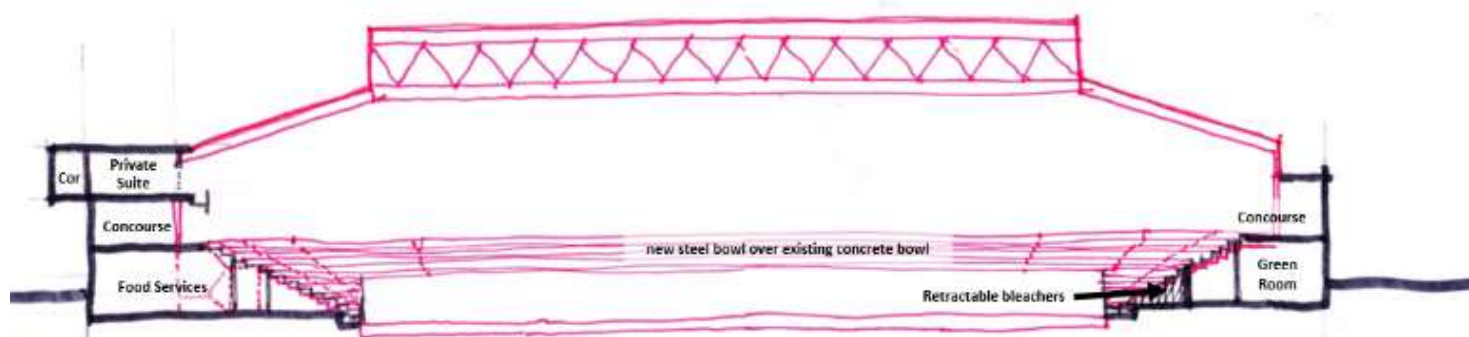
The Concept Design provides 12 regular suites and does not have a suites level party room as indicated in the program.

Building Sections

A sketch of a longitudinal and lateral section of the building, shown below, was developed as part of the pricing exercise.



REVISED LATERAL SECTION THROUGH ARENA LOOKING EAST



LONGITUDINAL SECTION THROUGH ARENA LOOKING SOUTH

The **Lateral Section** through the Concept Design illustrates:

- The extent of expansion to the north (right side).
- The extent of expansion of the main lobby to the south (left) side and the removal of the previous public washroom space below the lobby.
- The new steel bowl and the seating extending to the backside of the rinkboards.
- The relationship of the private suites to the ice surface and overall structure.

The **Longitudinal Section** through the Concept Design illustrates:

- The wider concourse and the extent to which they project beyond the edge of the existing building. On the west (right) side this extension is 4m while on the east (left) side it is 7m – the Private Suites Level projects an additional 3m beyond the concourse.
- The retractable seating on the west (right) side allowing for the stage to “nestle” into the seating and provide more flat-floor seating for concerts.

General Notes Regarding Demolition, Renovation and Expansion

The Concept Design is based on making the resulting facility as similar in performance as possible to a new facility. As noted previously this has required several major initiatives including:

- Expanding to the north for a properly functioning back-of-house area – this was also included in previous studies.
- Expanding significantly to the south to create a new lobby and front-of-house area at the southeast corner of the building.
- Expanding 4m to the west towards Grey Street.
- Expanding 7m to the east towards Minto Street although the Suites Level would cantilever an additional 3m beyond the Event and Concourse Level.
- The seating bowl would be reconfigured so that the corners would be faceted consistent with spectator arenas built in the past several decades. The new seating bowl would be a metal liner using the existing concrete bowl as part of the support system.

The extent of demolition involved in the renovation and expansion of the Community Arena is extensive:

On the Event Level and Front Entry area:

- All floor slabs are removed as there will be a major relocation of spaces and as a result, plumbing and electrical services relocation. Since most walls at this level are 8" masonry units the floor slabs will need to be thickened to suit the new layout of rooms.
- The northwest corner of the existing building will be excavated to allow for a marshalling area floor level similar to the ice slab level.
- Most existing exterior walls will be demolished, relocated and designed to current energy performance standards.
- All existing interior walls will be demolished and relocated.
- The seating bowl will have portions at the east and west ends demolished to facilitate the new steel liner bowl.
- All existing exit stairs will be demolished and relocated.

On the Concourse Level:

- The older northwest portion of the concourse support space will be demolished including walls and roof structure. The newer Lounge Space will be maintained and renovated as part of the expansion of this portion of the concourse.
- The main stairs leading to the Concourse Level will be removed.
- The east and west walls will be removed as part of an outward expansion of the concourse.
- The south portion of the building will be demolished and reconstructed as part of a southern expansion.

New Construction

The Concept Design maintains the existing sloped roof of the original Community Arena and surrounds it with what is essentially a new building. The Concept Design maintains the existing seating bowl but only for the purpose of using it as a support for a new steel liner seating bowl.

The exterior finish of the building has been priced with the following assumptions:

- Entry Lobby will be a two-storey curtain wall system,
- Community Arena Administration, Sudbury Wolves Administration, and Commercial Space will be curtain wall system above a .9m brick base with insulation and 200mm masonry backup,
- All other walls will be a brick/insulation/block assembly to a height of 4.5m with an insulated metal siding above. All glazing in lower walls to be punched windows and located in Staff, Event Offices, Performer's Lounge, Control and Food Services.
- Suites Lobby will have curtain wall to the full height of the third storey. Corridor to the Suites will be insulated metal system.
- Roof of existing arena to be refinished with insulated standing seam metal system.
- Back-of-house loading will have 2 loading docks with sloped ramps as well as one entry for truck access directly to the event floor.

The interior finishes as based on the Program of Spaces included in the Request for Proposals for the new facility planned for the Kingsway Site.

Summary of Areas

The total area of renovated and new construction is summarized as follows:

Event Level

The Event Level is currently a split-level floor plan with a Main Lobby and Administration at natural grade, and the remaining area at the current dressing room level. Unlike the existing facility there is no occupied (public washroom) space under the lobby area.

Total Renovated Area	56,766 ft ²
Total New Area	38,750 ft ²
Total Floor Area	95,516 ft²

Entry and Concourse Level

Total Renovated excluding bowl insert	15,560 ft ²
Total New Area	40,940 ft ²
New steel liner seating bowl	27,258 ft ²
Total Floor Area excluding ice surface	83,758 ft²

Suites Level

Total New Area	12,583 ft ²
Total Floor Area	12,583 ft²

TOTAL BUILDING AREA OF UPGRADED FACILITY	191,857 ft²
Total New Floor Area	92,273 ft²
Total Renovated Floor Area	72,326 ft²
New Seating Bowl Insert	27,258 ft²

Project Sequencing

The expansion of the Sudbury Community Arena puts at risk the schedules for both the Sudbury Wolves Hockey Team and the Sudbury Five Basketball Team. Other annual events held at the facility will also be at risk for losing one or more seasons. Ideally the expansion of the Community Arena can be phased to minimize construction impact on the facility's multi-year event calendar. However, this approach extends the construction period significantly and could impact the marketability of the facility over a 3-4 year period.

The proposed Concept Design expands the Community Arena in all four directions and creates challenges in terms of maintaining a seasonal (September-April) event calendar. Since the facility will be significantly replanned through a combination of expansion and renovation, there will be sequencing delays. For example, the Sudbury Wolves Hockey Club Spaces are in the southwest corner of the existing facility and in a new-build they will move to the northeast corner of the expansion. The team must move before renovation and expansion can start in the southern portion of the building. In this particular example there is a minimum delay of at least 18 months between the start of renovation of the northeast corner and the start of the demolition of the southwest corner.

There are significant challenges in maintaining some level of operation during construction:

- Public safety and code compliance, particularly around exiting will be a major concern,
- The building process will require compact construction zones around the building that allow for event hosting,
- The Concept Design expands over both Grey Street and Minto Street with significant preparation work required before actual construction,
- Administrative functions in the building will likely need to be temporarily relocated during the construction process but these have not been included in the Program Cost Plan.

There will be two construction seasons for the Community Arena expansion:

- summer season from April to September requiring the home teams to start their season at "away" venues,
- winter season from October to March and with a focus on interior work especially during the winter.

Extent of Work in each Phase

Phase 1 – Entry/Event Level Components

- Marshalling and loading
- Mechanical area including refrigeration – plant operation to be maintained during all phases of construction
- Complete Sudbury Wolves area
- Food Services
- Concession,
- Commercial
- Initial framing of the new Main Lobby – will be opened as part of Phase 2
- Staff – possibly repurposed during Phase 2
- Event Offices – possibly repurposed during Phase 2
- Control
- New north exit stairs

Phase 2 – Entry/Event Level Components

- Main Lobby – available before end of Phase 2
- Community Arena Administration
- Community Dressing Rooms
- Referees' Change Rooms
- Washrooms
- Storage/Community Storage
- New seating bowl and retractable seating

Phase 1 – Concourse Level Components

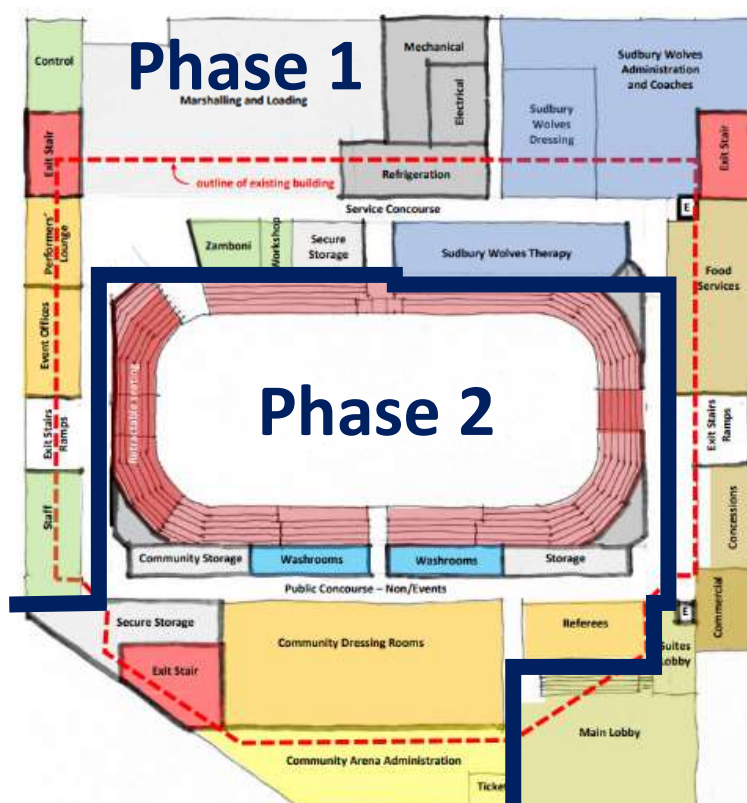
- North, east and west expanded concourse
- North concessions
- North washrooms
- North exit stairs
- Elevator to Suites Level

Phase 2 – Concourse Level Components

- Expanded south concourse
- South concessions
- South washrooms
- Main stair to concourse
- New seating bowl, club seats, loge boxes

Private Suites Level

The Private Suites Level will be started as part of Phase 1 but will not be completed or operational until the 2025/26 hockey and basketball season.



Phasing Calendar

The base pricing for the renovation and expansion of the Community Arena assumes a single phase of construction. However this would require that the building be closed for roughly a 24-month period while the construction takes place. This in turn would require that both the Sudbury Wolves and the Sudbury Five play home games in a different venue. A phasing schedule or calendar was prepared to allow for the ongoing operation of at least the hockey and basketball season. The timing of construction during the first phase of the project will result in the facility not being available for concerts and other events that require a properly functioning major loading area.

Schematic Schedule



As a comparison, the redevelopment of the Community Arena in a single phase is illustrated in the schedule below.



In the single-phase scenario the tendering of the project and the initial foundation work on the north side of the facility would happen towards the end of the (22/23) hockey/basketball season. The following (23/24) season would be lost and at least the first half of the next (24/25) season. There are opportunities for completing construction earlier in the 24/25 season such as starting foundation work at the north end of the site prior to the completion of the 22/23 season since this would not impact the facility's ability to host events. However that does render the north portion of the site a construction zone earlier and in a less desirable construction season.

The Schematic Schedule will see continuous construction on site but will be phased over 3 full hockey seasons. The calendar has been developed based on the most appropriate time to start construction. A start time for the design was based on the preferred construction start date. The following is a summary of key dates:

2021

October 1	<i>City issues a Request for Proposals for design teams</i>
November 30	<i>City signs contract with selected design team – design starts immediately and continues for 12 months</i>

2022

December 1	<i>Design documents complete - City issues tender package(s) for General Contractor or Construction Manager</i>
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2023

January 31	<i>Tenders close for General Contractor or Construction Manager</i>
February 15	<i>Contractor mobilizes on site and starts initial Phase 1 pre work at north end of site during last month(s) of hockey/basketball season – Phase 1 will take a total of 18 months</i>
March	<i>Phase 1 foundation work starts on the north portion of the site including piling</i>
April – year's end	<i>Ongoing Phase 1 construction work including during hockey/basketball season</i>

2024

September 1	<i>Completion of Phase 1</i>
September - December	<i>Contractor mobilizes on southern portion of site as Phase 2 begins</i>

2025

January – December	<i>Ongoing Phase 2 construction work including during hockey/basketball season</i>
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2026

January – March	<i>Ongoing Phase 2 construction work during hockey/basketball season</i>
April	<i>Ongoing Phase 2 construction work – installation of new seating bowl</i>
May 1	<i>Opening event at the completed Sudbury Community Arena</i>

4 Development of the Program Cost Plan (estimate)

The Program Cost Plan was prepared by WT Partnership based on the Concept Design developed by IMA and the Program of Spaces developed for the Design/Build Request for Proposals.

The development of the estimate was based on:

- The Concept Design included in this study,
- Similar new facilities in both Canada and the United States,
- Previous spectator projects involving significant renovation and expansion,
- Specific knowledge of the Northern Ontario construction market.

The building area was calculated as follows:

• Event Level	95,516 ft ²
• Entrance Level	12,439 ft ²
• Concourse Level	44,061 ft ²
• New Seating Bowl	27,258 ft ²
• Suites Level	12,583 ft ²
• TOTAL GROSS FLOOR AREA	191,857 ft²

The breakdown of renovated space and new construction was calculated as follows:

• Renovated space including the new ice slab	72,326 ft ²
• New seating bowl inserted over existing	27,258 ft ²
• New construction	92,273 ft ²

The development of the estimate assumes the following general principles:

- The intent of expanding and renovating the Community Arena is to achieve the same level of performance and functionality of a new Sports and Entertainment Complex (SEC) recognizing that there may be some compromises in terms of achieving that goal,
- As a general approach all material and systems within the renovated Community Arena will be new and consistent with, and require the same level of maintenance as a new SEC,
- Recognizing the significant changes made to the Community Arena, especially in the lower Event Level, the estimate assumes the total removal of the lower level concrete floor to facilitate slab thickenings, easier installation of new plumbing, electrical,
- The exterior building envelope will be of all new construction consistent with current code requirements. The expansion in all four direction does not allow for maintaining any of the existing exterior architectural features except for the main roof structure.

The Program Cost Plan was developed initially as a single-phased project and then modified to suit the specific requirements of phasing as illustrated on pages 12 and 13. There are considerable complexities in phasing the expansion of the Community Arena so that it can continue to function as a venue throughout the construction process. These include:

- Developing a schedule that realistically allows for functions to move from an old space to a new one before the old space is demolished,
- Recognizing that in a 2-phase process some spaces will either need to temporarily displace another function, or allow for the cost of temporary facilities – a temporary visitor's dressing room in Phase 2 is an example,
- Temporary pedestrian bridges that allow for the existing of the facility through or above construction,
- The relocation of construction offices from the north end during Phase 1 to the south end in Phase 2,
- The impact of inflation and fixed pricing for a long construction period.

Project Cost Plan Summary

The development of the Project Cost Plan assesses the construction elements under the following categories and determined the list below as a summary of those elements. The Summary prepared by WT Partnership provides a more detailed assessment of the quantities of materials and the associated unit costs rates.

A	Substructure		\$5,594,127
	• Foundation		
	• Basement		
B	Shell		\$18,937,775
	• Superstructure		
	• Exterior enclosure		
	• Roofing		
C	Interiors		\$17,165,957
	• Interior construction		
	• Stairways		
	• Interior finishes		
D	Services		\$23,514,500
	• Conveying systems		
	• Plumbing systems		
	• Heating, ventilation + air conditioning		
E	Equipment + Furnishings		\$4,878,985
	• Equipment		
	• Furnishings		
F	Special construction and demolition		\$4,315,246
	• Special construction		
	• Special demolition		
NET BUILDING, DEMOLITION COSTS			\$74,406,570
	General Conditions	12%	\$8,928,788
	Bonding	2%	\$1,666,707
	Overhead and Profit	5%	\$4,250,103
	Estimating Contingency	15%	\$13,387,825
	Escalation		
TOTAL BUILDING			\$102,639,993
	Site Development		\$2,307,865
TOTAL PROJECT CONSTRUCTION COST – SINGLE PHASE			\$104,947,858
	Consulting Fees – 10%		\$10,494,786
TOTAL PROJECT COST – SINGLE PHASE			\$115,442,644

Overview for Two-Phase Building

The overall phasing of the project has been described on page 12 of this report with a schematic schedule on page 13. The overview of estimated costs for a two-phase project recognizes that:

- There is a requirement to decommission the majority of the Contractor's facilities on the northern portion of the site and relocate to the south,
- The Main Lobby, while started in Phase 1, has the majority of construction in Phase 2,
- The majority of the Site Work will be completed as part of Phase 1,
- While the estimate for a single-phase project does not have an escalation allowance, a 7.5% escalation allowance will be used for Phase 2.

The breakdown of Phase 1 and Phase 2 components for estimating is shown below.

Outline of Areas	Phase 1	Phase 2	Total Construction
Event and Entry Level excluding Main Lobby	77,385 ft ²	23,850 ft ²	101,234 ft ²
Main Lobby – 10% in Phase 1 and 90% in Phase 2	670 ft ²	6,048 ft ²	6,720 ft ²
Concourse Level	28,496 ft ²	15,565 ft ²	44,061 ft ²
Suites Level	12,583 ft ²		12,583 ft ²
New Seating Bowl		27,258 ft ²	27,258 ft ²
TOTAL FLOOR AREA	119,136 ft²	72,721 ft²	191,857 ft²

Summary of both Phases in current dollars	Phase 1	Phase 2	Total Construction
	\$71,236,218	\$31,403,775	\$102,639,993

Phase 2 Additional Costs

- Mobilization to south portion of site and lost efficiencies (1%) **\$314,038**
- Temporary structures for exiting while under construction **\$50,000**
- 7.5% escalation for 18-month stagger between phases **\$2,382,586**

			Total Construction
TOTAL COST FOR PHASE 2 BUILDING	\$71,236,218	\$34,150,399	\$105,386,617

The Construction Cost of the building is only part of the overall Project Cost. The additional costs are outlined below;

Single Phase Project		Two Phase Project	
• Construction	\$102,639,993	• Construction	\$105,386,617
• Site	\$2,307,865	• Site factored for escalation	\$2,423,260
Sub Total	\$104,947,858	Sub Total	\$107,809,877
• Consulting Fees – 10%	\$10,494,786	• Consulting Fees – 10%	\$10,780,988
TOTAL PROJECT COST	\$115,442,644	TOTAL PROJECT COST	\$118,590,865

The phasing of the renovation and expansion of the Sudbury Community Arena is a complex and lengthy undertaking. While it allows for the ongoing operation of the facility and the sports franchise that call the facility home, it compromises the spectating experience for three full seasons. It delays the opportunity for generating revenues from larger seating numbers, club seats, loge boxes, and private suites. It also has an impact on the facility's ability to host non-sports events during the year. This may be the greatest challenge to a two-phase process as it significantly affects the ability to develop a top-tier operating group that can effectively market the new facility.