

City of Kitchener
Indoor Recreation Complex at RBJ Schlegel Park
1955 Fischer-Hallman Road
Project Update Report

March 8th, 2024

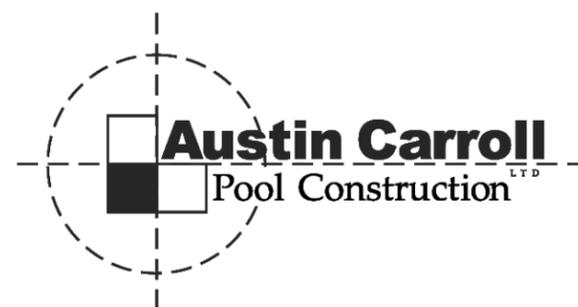
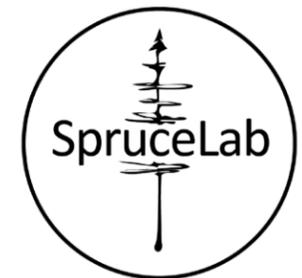




MULTIPLY



AECOM



The City of Kitchener is situated on the traditional territory of the Neutral, Anishinaabeg and Haudenosaunee Peoples.

We recognize our responsibility to serve as stewards for the land and honour the original caretakers who came before us. Our community is enriched by the enduring knowledge and deep-rooted traditions of the diverse First Nations, Métis and Inuit in Kitchener today.



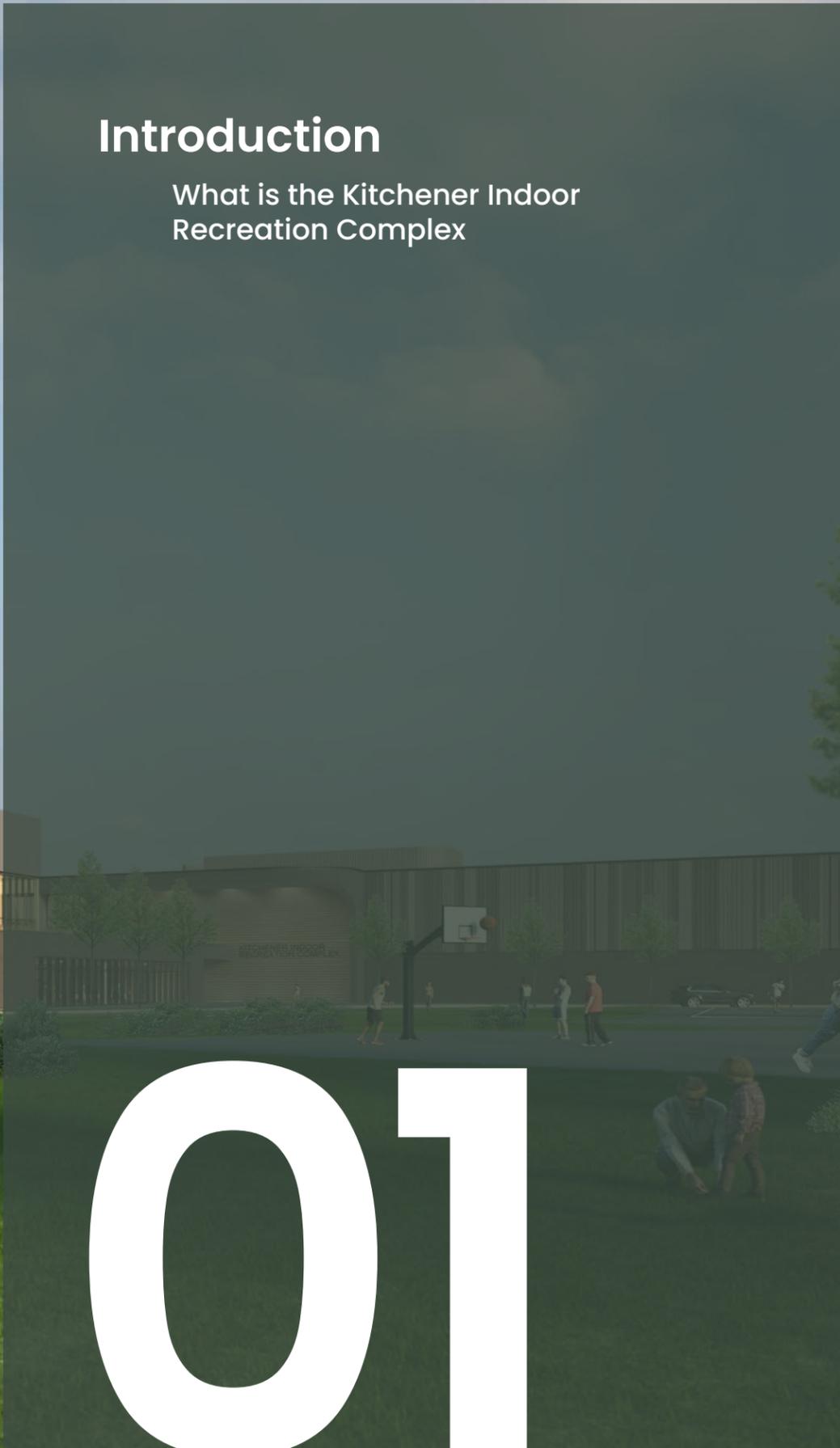
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Introduction

What is the Kitchener Indoor
Recreation Complex

01



What is the Kitchener Indoor Recreation Complex?

The 189,600 square foot indoor Kitchener Indoor Recreation Complex (KIRC) stands as a testament to our core values and commitment to excellence in every aspect.

Programming Features:

- **Aquatic Center:** Dive into the state-of-the-art aquatic center boasting two pools: an 8-lane 25m pool for serious swimmers and a warm water leisure pool for relaxation and family fun.
- **Turf Fieldhouse:** Experience FIFA-recommended excellence in the full-size 11-a-side turf Fieldhouse, adaptable into four smaller fields to accommodate various sports and events.
- **Elevated Track:** Reach new heights on the elevated track, offering panoramic views of the action below.
- **Cricket Batting Practice Lane:** Perfect your cricket skills in the specialized batting practice lane.
- **Second Floor Lobby and Viewing Area:** Enjoy the ambiance and excitement of the aquatic center from the second-floor lobby and viewing area.
- **Multipurpose Rooms:** Host events, meetings, and gatherings in the versatile multipurpose rooms, designed to meet the diverse needs of the community.
- **Dedicated Team Dressing Rooms:** Support your team in the dedicated dressing rooms, equipped for the demands of the Fieldhouse.

Resiliency Features:

- **Pioneering a green future:** The Kitchener Indoor Recreation Complex is on track to become one of Canada's first recreation facilities certified under the Zero Carbon Building Standard v3.
- **Elevating inclusivity:** The Kitchener Indoor Recreation Complex embraces universal design principles, ensuring barrier-free access and a welcoming environment for all, making it a beacon of accessibility and community integration.
- **Setting a new standard in landscape integration:** The Kitchener Indoor Recreation Complex harmonizes its design with the surrounding parkland, incorporating native plantings, stormwater management features, and outdoor recreation areas to foster a seamless transition between built and natural environments.

KIRC isn't just a place for the community to come play—it's a symbol of shared values, a hub of activity, sustainability, inclusivity, and a source of pride for the community.

Executive Summary

The Kitchener Indoor Recreation Complex (KIRC) at RBJ Schlegel Project Update Report provides a detailed overview of the project's evolution, emphasizing the collaborative efforts of the Integrated Project Delivery (IPD) team. Initially the IPD project team reviewed the City's original business case in detail, and identified a number of additional design components that were required in the facility, as well as several enhancements based on best practices and the subject matter expertise of IPD team members who had been involved in building similar facilities in the past. That necessitated a strategic pivot to redefine the design and budget in a way that would encompass all project requirements without compromising quality.

The IPD team, through a rigorous validation phase involving detailed design reviews, stakeholder consultations, and cost evaluations, realigned and right sized the project. This phase was critical in positioning the project's components with overarching goals and stakeholder expectations. The team's commitment to collaboration and innovation has resulted in a stretch target cost of \$143,820,000 (inclusive of non-refundable HST) with a construction timeline set to begin in May 2024 and completion anticipated by the summer of 2026. This target reflects the team's dedication to maintaining quality and functionality while adhering to financial constraints.

In terms of cost efficiency, the KIRC project stands out for its approach to construction costs on a per square foot basis. Adjusting for soft costs to provide a direct comparison with construction expenses, the project's construction cost is estimated at \$680 per square foot. This positions the KIRC project at the lower end of the spectrum for similar projects locally and within the Greater Toronto Area (GTA), highlighting the team's efficiency and value-driven approach. This careful management of costs without sacrificing quality or functionality demonstrates the IPD team's commitment to delivering a state-of-the-art facility that aligns with financial sustainability and strategic planning goals, all while ensuring a user-centric design approach.

The Team

The Integrated Project Delivery (IPD) team, as depicted in the team configuration diagram, shown on the following page, represents a cohesive and multi-disciplinary group uniquely assembled for this project. This team, comprising professionals from various sectors including architecture, engineering, construction, and client representation, has been instrumental in the comprehensive completion of the tasks and analyses presented in this report. Their collaborative efforts, rooted in the principles of IPD, have fostered an environment of shared responsibilities and mutual respect, essential for the innovative solutions and outcomes achieved.

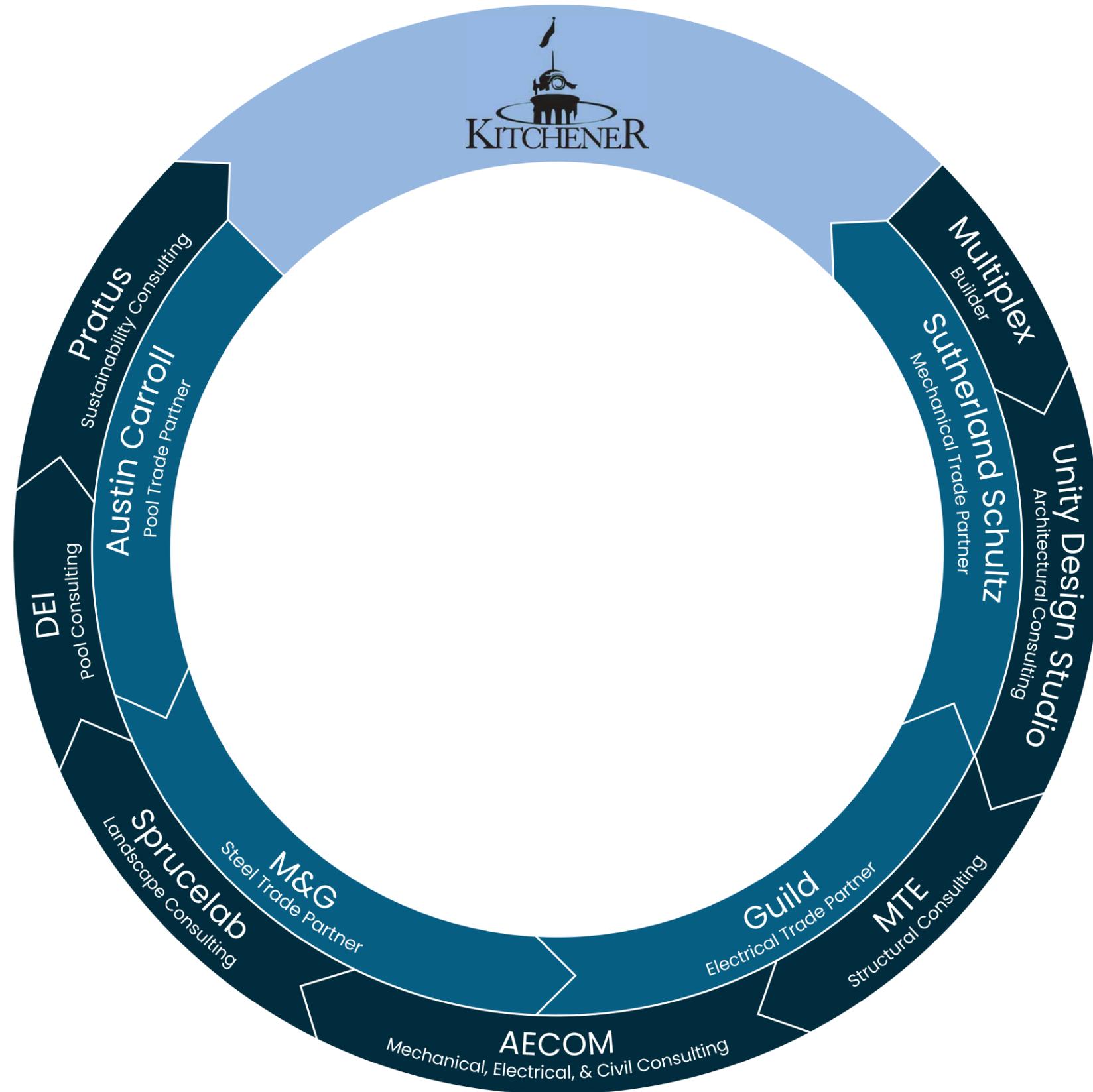
We extend our gratitude to the leadership and pivotal contributions of select key team members, who have been integral to the project's progression. Their commitment, approach, and hands-on dedication have not only steered the project through complex challenges but have also ensured that the objectives align with the highest standards of quality and efficiency:

- **City of Kitchener:**
Michael May, Denise McGoldrick, Bob Cheyne, Darren Becks, Patrick King, Elin Moorlag Silk, Aaron Gingerich, Ryan Scott, Jim Edmondson, Osama Siddiqui, Chris Campbell,
- **Multiplex Construction:**
Stuart McCready, Hossam Elalfy, Atiaan Stander, Amin Ahadipour, Nisha Jeyathas, Luke Bearzatto
- **Unity Design Studio:**
Michael Gallant, Bill Lett, Andrew Dietrich, Ryley Wheelhouse, Darren McKinley, Sydney Symak, Scott Patterson, Jade Payne
- **MTE:**
Jeff Reid, Aaron Matthews
- **AECOM:**
Julia Sacher, Winston Hung, Milan Kuljanin, Alex Penlington, Nagy Tadros, Nathanael Fach
- **Spruce Lab:**
Sheila Boudreau, Julia van der Laan de Vries
- **DEI:**
Jamie, Lopes, Brittany Aho
- **Pratus:**
Oleksandra Onisko, Daniella Ruggiero, Jay Doshi
- **Sutherland Schultz:**
Nancy Vaughan
- **Guild:**
Melissa Christison
- **M&G:**
Chris Adach, Leonardo Navarro
- **Austin Carroll:**
Bob Gaetan

01 Introduction

Team Diagram

- Owner
- Consultants
- Trade Partners





Project Overview

Overview

What is Integrated Project
Delivery (IPD)?

Project Values

02

02 Project Overview

Overview

In 2013 the City of Kitchener began dreaming of a vibrant indoor recreational space, complete with a community pool, and a multi-use sports field. By 2019, the community's voice reshaped these plans, elevating the pool and an artificial turf field to top priorities due to a strong demand for swimming and indoor sports. In 2021, a detailed analysis was set in motion to turn this vision into reality, aiming to create a dynamic hub for sport in South Kitchener.

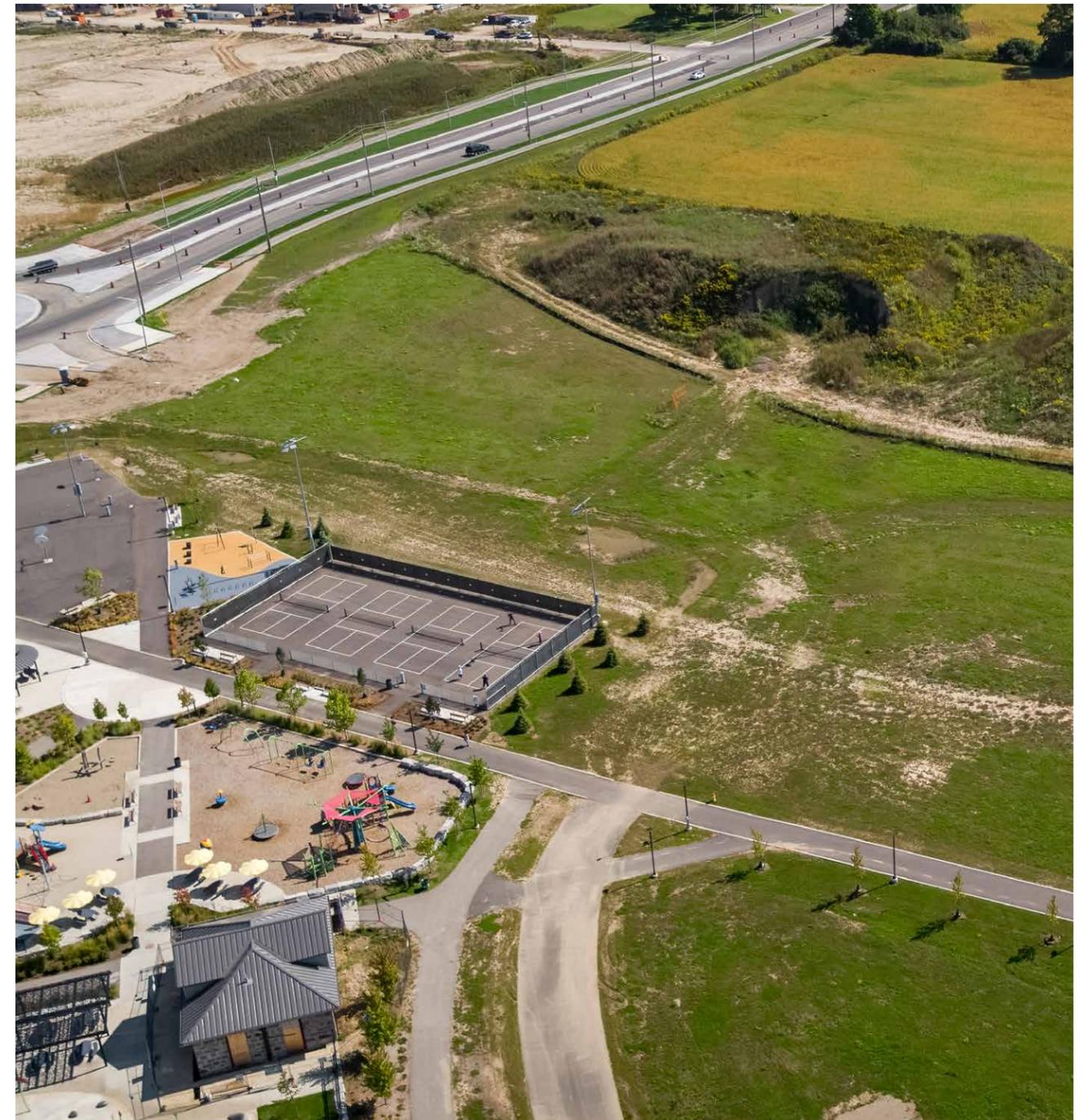
A business case was developed that recommended building the Aquatic and Indoor Turf Facilities to meet the increasing demand for such amenities in Kitchener. It suggested that combining the Aquatic Centre and Indoor Turf Facility into one project is the most effective approach in terms of construction and cost.

In August 2023, the Integrated Project Delivery (IPD) team was brought on board, marking the beginning of an ambitious journey to bring the Indoor Recreation Complex project to life. By September 11th, the team was fully engaged, diving deep into the wealth of documentation and previous analyses that had laid the groundwork for this significant community development.

As the team sifted through the studies, it became evident that a fresh perspective on the building's location and architectural design was necessary to truly enhance the experience for future users and the goals set by the City. This insight led to the development of four distinct design options for the City's consideration. Among these, one option stood out for its seamless integration of spaces and intuitive flow, promising a cohesive and enjoyable environment for visitors and also considered operational efficiency.

In their thorough review, the IPD team also revisited some earlier decisions, such as the exclusion of a second floor viewing area for the pool and Fieldhouse, and the inclusion of a track, which seemed a natural fit for a facility of this caliber. This re-evaluation opened the door to a vision of a state-of-the-art Aquatic Centre, a full-size FIFA Fieldhouse, and an elevated second floor. This floor would not only offer a track overlooking the Fieldhouse but also prime viewing spots for the competitive swimming area, enhancing the spectator experience.

The team also explored the possibility of integrating a gymnasium into the design. This versatile space could be included in the initial construction phase or added later, providing flexibility in meeting the community's evolving needs.



By early November, the design had evolved, and City staff confirmed the direction of this expanded project for City Council's consideration. The IPD team's diligent work over just two months had significantly enhanced the project's vision, ensuring that the Indoor Recreation Complex would meet the community's expectations for a modern, accessible, and versatile sports and recreation facility.

In December, the blueprint for the Indoor Recreation Complex began to take shape with invaluable input from City operational staff. Their hands-on experience and knowledge of day-to-day operations brought practical insights into the design process, ensuring that the facility would not only be architecturally sound but also operationally efficient and user-friendly. This collaborative approach allowed for a more nuanced understanding of the facility's needs, integrating operational considerations into the design from the very beginning.

As the new year rolled in, January marked a pivotal moment in the project's development. The team shifted their focus towards embedding value into every aspect of the project. This involved a strategic review of "big moves" – key decisions or changes that could significantly impact the project's cost-effectiveness, sustainability, and overall success. This period was characterized by a deep dive into innovative solutions, materials, and construction techniques that could enhance the project's value without compromising on quality or functionality.

With the project validation deadline looming, the urgency to finalize the design and construction schedule intensified. By this stage, the team was honing in on a May 2026 occupancy date, a timeline that was ambitiously quicker than what is typically expected with projects of this scale and complexity. This accelerated schedule was a testament to the team's commitment to efficiency and their ability to leverage the Integrated Project Delivery model to streamline processes, enhance collaboration, and make swift, informed decisions.

Now, as the project transitions from the planning and design phases into implementation, there's a palpable sense of confidence among the team members. Their rigorous analysis, collaborative efforts, and strategic planning have culminated in a solid foundation for the project's success. With a clear understanding of the costs and a robust schedule in place, the team stands ready to bring the vision of the Indoor Recreation Complex to life, eager to move into the next phase of making this transformative project a reality for the City.



Traditional Delivery

Integrated Project Delivery

Fragmented, assembled or 'just-as-needed' or 'minimum-necessary' basis, strongly hierarchical, controlled	Teams	An integrated team entity composed of all project stakeholders, assembled early in the process, open, collaborative
Linear, distinct, segregated; knowledge gathered "just-as-needed"; information hoarded	Process	Concurrent, multi-level, integrated; early contributions of knowledge and expertise; information openly shared
Individually managed, transferred to the greatest extent possible	Risk	Collectively managed, appropriately shared
Individually pursued; minimum effort for maximum return; (usually) first-cost based	Compensation/Reward	Team success tied to project success; value-based
Paper-based, 2 or 3 dimensional; analog	Communication/Technology	Digitally based, virtual, 4, 5 or 6 dimensional; Building Information Modeling
Minimum effort for maximum return; minimize or transfer risk; don't share	Agreements	Encourage, foster, promote and support open sharing and collaboration, full integration



What Is Integrated Project Delivery (IPD)?

IPD is a project delivery approach that integrates people, systems, business structures and practices into a process that collaboratively harnesses the talents and insights of all participants to optimize the project results, increase value to the owner, reduce waste, and maximize efficiency through all phases of design, fabrication, and construction. Key features of IPD include:

- Early involvement of key participants;
- Shared risk and reward based on project outcome;
- Joint project control;
- Reduced liability exposure; and
- Jointly developed and validated targets.

At the core of an IPD project are collaborative, integrated, and productive teams composed of all project stakeholders. Building upon early contributions of individual expertise, these teams are guided by principles of collaboration, open information sharing, team success tied to project success, shared risk and reward, value-based decision making, and utilization of full technological capabilities and support. Historically, IPD has been used on public and private projects alike achieving a success rate greater than 98% against established quantitative project performance measures.

What Are The Benefits of IPD?

IPD establishes a platform where success is measured in much broader metrics than just cost or schedule. On an IPD project, the team establishes a set of common values, goals, and objectives that are arrived at through a process that begins with every stakeholder answering the question “What is important to me to consider this project a success?” The resulting goals and values roll up and build to commonly held conditions of satisfaction, which guide and inform the decisions and actions of the team, and almost always include things on team dynamics, user satisfaction, community satisfaction, collaboration, sustainability and performance, etc., in addition to cost, schedule, quality. Having a broader set of metrics for success helps the team move in a more balanced and informed fashion toward the desired outcomes.

All project stakeholders are brought on board early in the process, where the ability to leverage experience and expertise yields high return in terms of positive impact to the project while costs are low.

IPD removes the traditional contractual boundaries between project stakeholders, placing instead a single contractual boundary around the entire design and construction project. This removal of internal contractual boundaries incentivizes the team to focus on optimizing the whole, and not just the piece. IPD’s shared risk and reward model based on project outcomes furthers the creation of a “best for project” environment. It’s in everyone’s best interest that the project be successful, not just their part. This causes team members to collaborate rather than compete, actively seeking opportunities to support one another and, ultimately, the project.

Industry research backs all this up. Those with interest might wish to seek out case studies and other industry reports at the Integrated Project Delivery Alliance (IPDA, see www.ipda.ca), a Canadian not-for-profit focused on betterment of the Canadian design and construction industry.

Project Values

The establishment of project values by the Integrated Project Delivery (IPD) team serves as a foundational pillar for the entire IPD initiative. These values, agreed upon and collectively defined by all team members, function as a multifaceted lens through which every aspect of the project is examined. This comprehensive approach to value definition ensures that the project's vision and objectives are not just singularly focused but are broad and inclusive, encompassing various dimensions of success.

By embedding a diverse set of values at the heart of the project, the team equips itself with a versatile framework for decision-making. This framework is particularly crucial when faced with significant project decisions. In these moments, the impact of potential choices is evaluated not in isolation but against the backdrop of the project's core values. This methodical consideration ensures that decisions are not made in a vacuum but are reflective of the project's overarching goals and principles.

Moreover, this values-centric approach fosters a strong sense of alignment among team members. When decisions are made with a clear understanding of how they resonate with the established values, it naturally brings the team together, ensuring that everyone is moving in the same direction. This unity is vital for maintaining project cohesion and momentum, especially in the face of challenges and complexities inherent in large-scale projects.

Ultimately, the emphasis on project values enhances the likelihood of achieving optimized and balanced outcomes. It ensures that decisions are not just effective in the short term but are sustainable and beneficial from multiple perspectives. This holistic approach to project management not only elevates the quality of the outcomes but also reinforces the collaborative spirit of the IPD model, setting a standard for how ambitious projects can be successfully realized through shared vision and values.



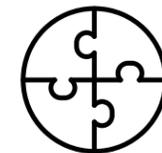
Holistic Design



Community Centered



Integrity & Innovation



Integrative Harmony



Fiscal & Schedule



Holistic Design

The seamless fusion of innovation, beauty, sustainability, and functionality in every aspect of the indoor recreation complex. This value includes:

<p>Purposeful Design</p> <p>Create a facility design that aligns with its intended functions and users' needs, ensuring an intuitive user experience.</p>	<p>Innovative Excellence</p> <p>Adopt progressive design ideas that bring value to the project and supported by cutting-edge technologies.</p>	<p>Aesthetic Appeal</p> <p>Create a visually captivating and iconic facility that becomes a community landmark.</p>
<p>Sustainable Imprint</p> <p>Achieve net-zero energy use and a regenerative design that leaves a positive environmental legacy.</p>	<p>Adaptive Design</p> <p>Design flexible spaces for various activities and user groups, enhance the facility's utility for now and in the future.</p>	<p>Operational Efficiency</p> <p>Design the facility to account for operational efficiency and long-term redundancy.</p>

Kitchener Indoor Recreational Complex 



Community Centered

Commit to actively integrating the community and users at every stage of the design and build process. Listen to the community's needs, and establish the project as a community cornerstone, and ensure voices of stakeholders are acknowledged. This value includes:

<p>Addressing Community Needs</p> <p>Commit to facility design that responds to the unique needs and aspirations of the local community.</p>	<p>Proactive Community Engagement</p> <p>Ensure community and user involvement in the design and build phases that instills a sense of ownership and partnership.</p>	<p>Efficiency through Innovation</p> <p>Employ novel and forward-thinking solutions to serve the community.</p>
<p>Inclusion</p> <p>Foster accessible, and welcoming environments that embrace everyone, regardless of their background or ability.</p>		

Kitchener Indoor Recreational Complex 



Integrity & Innovation

Uphold the highest standards of integrity and innovation. Embody a thriving culture of excellence and maximize IPD value delivery. This value includes:

<p>Culture of Excellence</p> <p>Nurture an environment of excellence and illustrate the advantages brought about by IPD best practices.</p>	<p>Exemplar Facility</p> <p>Create a project that sets a successful example for others to follow.</p>	<p>Educational Commitment</p> <p>Embrace the responsibility of mutual teaching and learning for industry.</p>
<p>Communication</p> <p>Maintain consistent communication with all stakeholders and users.</p>		

Kitchener Indoor Recreational Complex 



Integrative Harmony

The project is dedicated to honouring traditions, the natural environment, and artistic elements. This value includes:

<p>Cultural</p> <p>Incorporate elements of culture and tradition in the design. Ensure heritage is respectfully echoed within the project.</p>	<p>Environmental</p> <p>Ensure the facility blends with the outdoor environment and contributes positively to the natural landscape.</p>	<p>Artistic</p> <p>Integrate diverse and meaningful art that resonates with and enriches the community.</p>
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Kitchener Indoor Recreational Complex 



Fiscal & Schedule Responsibility

Deliver design quality within the defined budget and timeframe. This value includes:

<p>Planning & Execution</p> <p>Create efficient planning, design, and construction processes that leverage lean tools and best practice.</p>	<p>Fiscal Management</p> <p>Find a balanced approach between budget management and project values and goals.</p>	<p>Safety</p> <p>Maintain an integrated culture of safety throughout design and construction. Target zero incidents.</p>
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Kitchener Indoor Recreational Complex 



Design Intent

- Architectural Overview
- Program and Function
- Response to Site
- Building Systems
- Sustainability
- Construction Sequencing

03



KITCHENER INDOOR
RECREATION COMPLEX



Architectural Overview

The Kitchener Indoor Recreation Complex, set to redefine the landscape of the RBJ Schlegel Park campus, epitomizes a groundbreaking venture in community revitalization and recreational innovation. This initiative, deeply rooted in the principles of Integrated Project Delivery (IPD), stands as a testament to the power of collaborative synergy in transforming ambitious visions into tangible realities. The Complex is designed to be a vibrant epicenter for community interaction and a wide spectrum of recreational activities, facilitated by its comprehensive array of facilities that include an Aquatic Centre, a FIFA-sized Field House, adaptable Multi-Purpose Community Rooms, a Walking Track, and an array of support spaces.

The strategic employment of IPD has been instrumental in ensuring that the Complex not only meets the current needs of the community but is also equipped for future expansions, such as the proposed gymnasium. This foresight underscores the project's commitment to long-term adaptability and relevance, ensuring that the facility remains a beacon of community activity and engagement for years to come.

Architecturally, the Complex has been conceived with a keen focus on balancing grandeur with approachability, ensuring that the structures resonate on a human scale, particularly in areas of significant public interaction. This design philosophy, augmented by the IPD process, promotes an environment that is both welcoming and accessible, enhancing the sense of community and belonging. The careful orchestration of natural light, coupled with the minimization of shadow effects, further enriches the spatial experience, creating an ambiance that is both uplifting and conducive to recreational pursuits.

The choice of materials plays a critical role in articulating the Complex's aesthetic and functional identity. Through the IPD framework, a collaborative selection process has led to the use of natural wood at entryways and durable stone in high-traffic areas, marrying resilience with aesthetic appeal. The facade, animated with articulated metal panels, exemplifies a cost-effective yet visually compelling solution, born from the collaborative insights fostered by IPD.

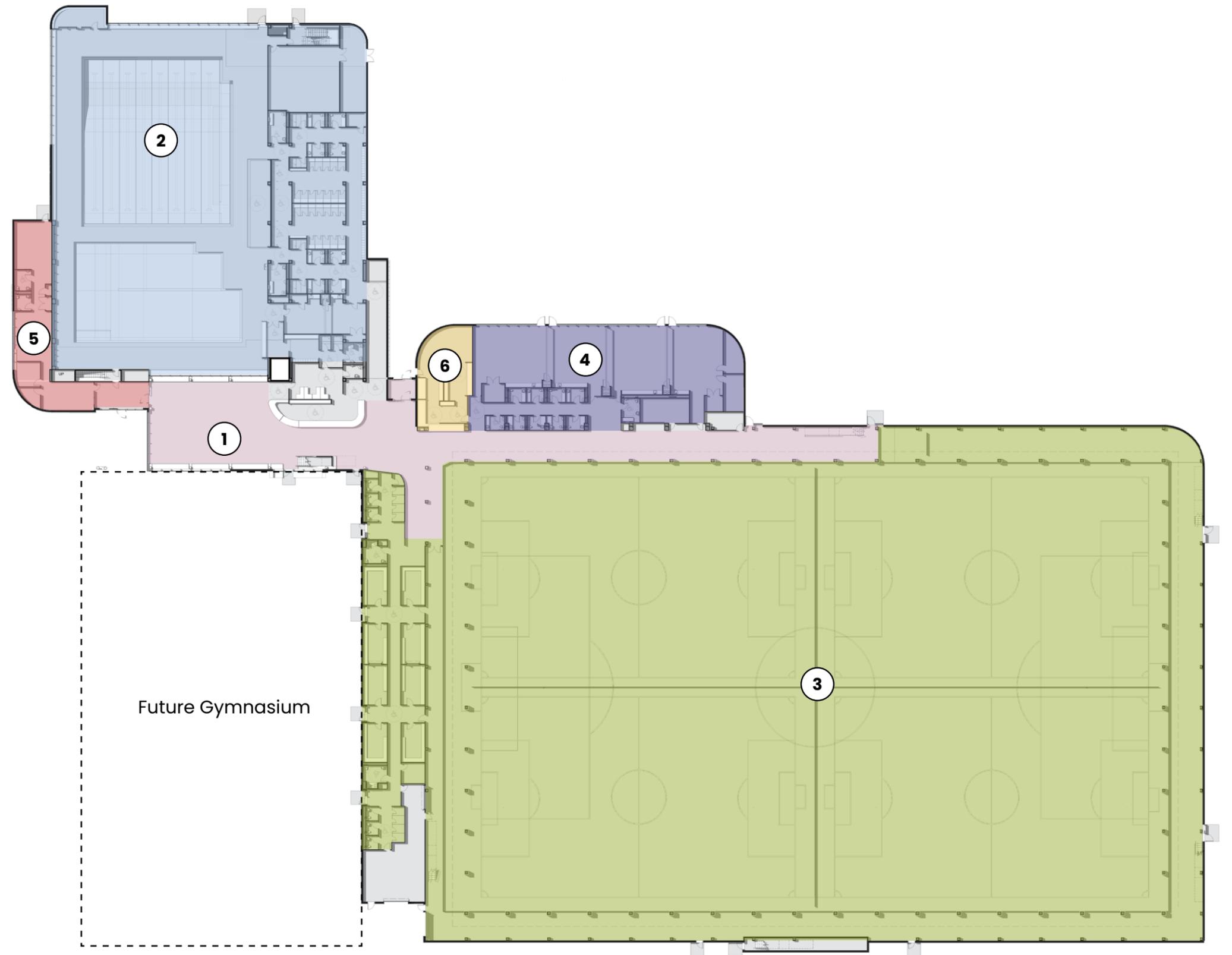
Upon entering the Complex, visitors are greeted with a layout that emphasizes connectivity and openness, a direct result of the IPD-driven design approach that values intuitive navigation and engagement with the facility's key areas. The strategic placement of the main reception area provides panoramic oversight, enhancing wayfinding and security, while the integration of the Field House with the lobby space fosters a dynamic interaction with the sporting activities within, enriching the overall visitor experience.

The structural framework of the Complex, prominently featuring cross-laminated timber, not only imbues the space with warmth but also reflects a commitment to environmental sustainability. This, along with other green features like green roofs and high-performance glazing, is emblematic of the project's dedication to ecological stewardship, a priority that has been meticulously integrated into the development process through the collaborative ethos of IPD.

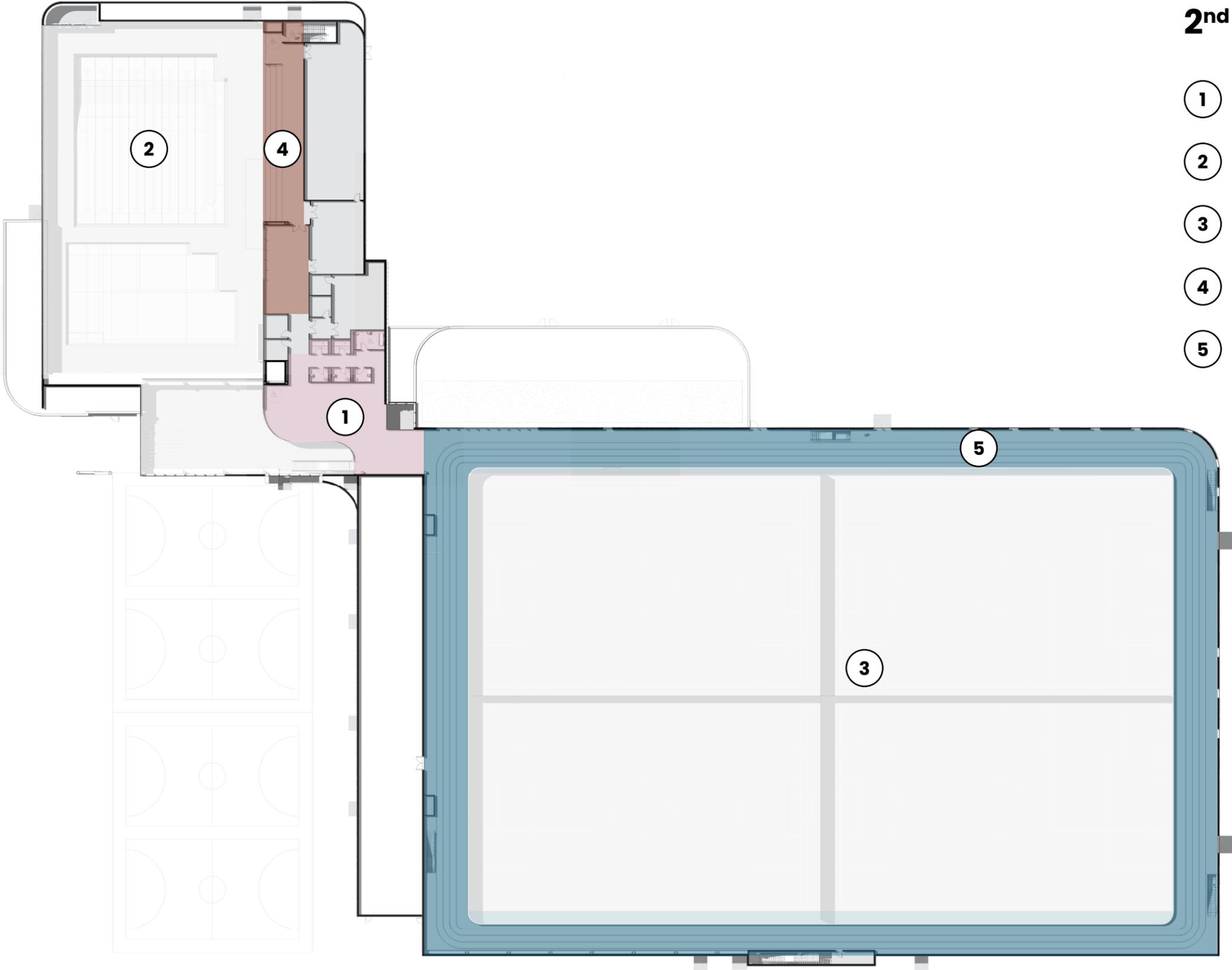
In essence, the Kitchener Indoor Recreation Complex is a beacon of innovation and community engagement, brought to fruition through the harmonized efforts of a multidisciplinary team united by the IPD process. This collaborative model has not only facilitated the efficient and effective realization of the project but has also instilled a spirit of shared ownership and collective achievement among all stakeholders. As a result, the Complex is poised to set a new benchmark in civic amenities and recreational spaces, enhancing the urban fabric of the City of Kitchener and serving as a vibrant hub for community life and activity.

Ground Floor/1st Floor Layout

- ① Lobby
- ② Aquatic Centre
- ③ Fieldhouse
- ④ Multi-Purpose Rooms
- ⑤ Kitchener Soccer Offices
- ⑥ Concession



2nd Floor/Mezzanine Layout



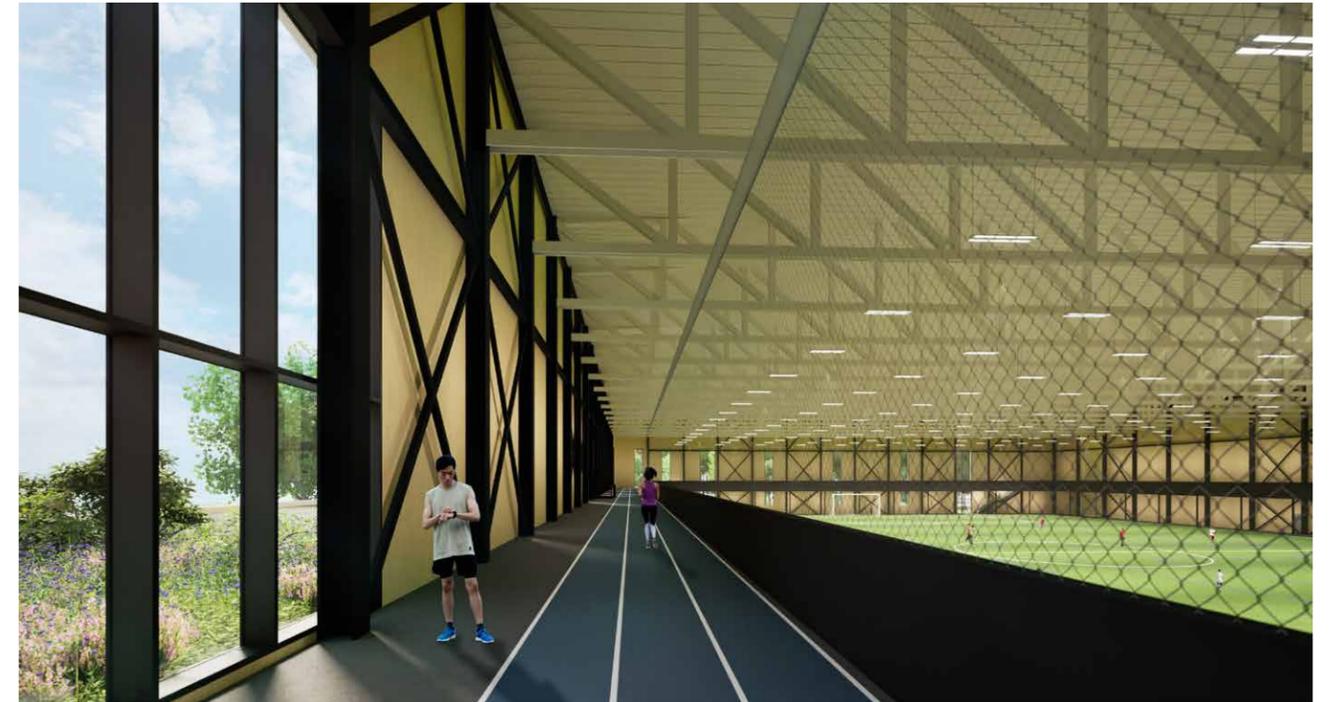
- ① Upper Lobby
- ② Aquatic Centre Below
- ③ Fieldhouse Below
- ④ Aquatic Centre Viewing
- ⑤ Track

Program and Function

The original business case for the Kitchener Indoor Recreation Complex laid out an ambitious plan that included a comprehensive 45,000 sq. ft. Aquatic Centre, a substantial 65,000 sq. ft. Fieldhouse, and an adaptable multipurpose space designed to incorporate essential amenities such as change rooms and administrative offices. The vision behind this initiative was to create a state-of-the-art facility that would serve as a hub for community engagement, physical activity, and sports excellence.

As the project evolved under the guidance of the Integrated Project Delivery (IPD) team, a deeper analysis underscored the need to extend the initial programming. A key moment in the project's development was the recognition of the benefits both to the City and its residents, of incorporating a full-size FIFA soccer pitch within the Fieldhouse. This innovative feature was projected to significantly enhance the facility's revenue potential by approximately \$420,000 annually. Moreover, a walking/running track was included, adding a new dimension to the facility, encouraging community members to engage in healthy, active lifestyles. This multifaceted approach not only diversified the offerings at KIRC but also reinforced its role as a catalyst for community health and well-being.

In light of these comprehensive evaluations, the IPD team engaged in a collaborative decision-making process with the City, exploring various other alternatives to refine the project's scope. This process culminated in the selection of an optimal solution that involved the strategic addition of a second level. This new tier was designed to host spectators for pool events, accommodate the walking/running track, and house mechanical systems. This comprehensive approach, driven by a commitment to uphold the City of Kitchener's stringent accessibility standards and to significantly enhance the overall user experience, also led to integrate expanded circulation paths, washrooms, administrative offices, and dedicated spaces for mechanical and electrical systems, designated for loading and custodial functions. The expansion of the plan was seen not as a deviation from the original business case but as a necessary progression to ensure that the facility would meet the dynamic needs of its users both now and into the future, whilst adhering to best practices in design and functionality.



The team's dedication to creating a safe and inviting environment was further evidenced by the implementation of a Crime Prevention Through Environmental Design (CPTED) analysis. This strategic assessment yielded valuable insights into how the design of the facility could be optimized to promote safety, security, and a sense of community. By reimagining the configuration of corridors, spectator areas, and changing facilities, the project was aligned more closely with its foundational values, ensuring a space that was not only functional but also welcoming to all members of the community.

The integration of new program additions into the Kitchener Indoor Recreation Complex has been designed to resonate with the project's core values. These additions, including the versatile multipurpose spaces, enhanced spectator areas, and the inclusion of a regulation-size FIFA soccer pitch, have been carefully aligned with the original vision of creating a dynamic and accessible space for the community.

Response to Site

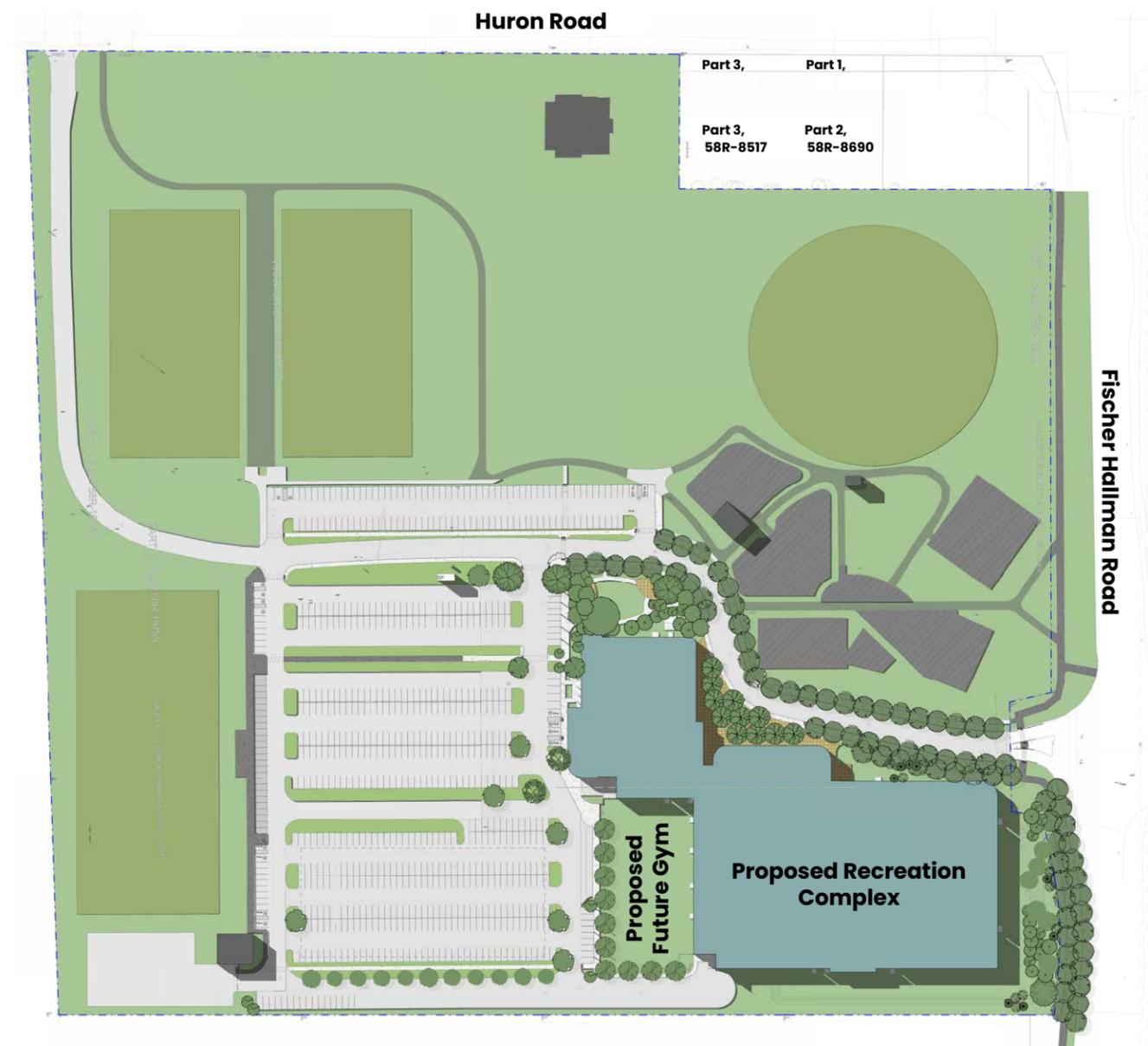
The development of the Kitchener Indoor Recreation Complex is a testament to thoughtful planning and consideration of community needs. The strategic placement of the Complex, with a keen eye on urban design principles facing Fischer-Hallman Road, ensures that it complements the surrounding environment and enhances the park's appeal. By positioning the Aquatic Centre centrally, it becomes a vibrant visual hub for the park, drawing visitors into the heart of the park and the Indoor Recreation Complex.

The design of the building thoughtfully incorporates an internal circulation spine, facilitating seamless access to the park's diverse outdoor facilities to the northeast, as well as convenient connections to parking and soccer fields to the west. This spine not only serves as a functional element for navigation but also enriches the visitor experience by integrating the indoor and outdoor environments of the park.

Addressing a gap in the original master plan, the addition of parking on the north side of the access road significantly improves accessibility and convenience for park users. This enhancement, born from the collaborative insights of the Integrated Project Delivery (IPD) team, also brings about efficiencies in infrastructure, reducing the length of roadways and thereby saving costs. The parking spaces on site are thoughtfully integrated into the landscape through the use of infiltration trenches, landscaping, and a tree canopy. These measures not only increase capacity but also contribute to the aesthetic and environmental quality of the park.

The incorporation of Electric Vehicle (EV) charging stations throughout the park, with provisions for future expansion, reflects a commitment to sustainability and accommodates the growing trend towards electric mobility. Furthermore, the site's design considers the importance of public transportation access and active transportation routes, promoting alternative and environmentally friendly modes of transportation.

The reserved space for a future gymnasium in the southwest corner of the Indoor Recreation Complex exemplifies forward-thinking in planning for community growth and evolving needs. This area, currently a passive outdoor space, offers flexibility for future development, ensuring the Centre can adapt and expand its offerings.



The landscape design for the KIRC project is deeply influenced by the vital role of water in sustaining life and its connections to land, humans, and wildlife. It integrates storytelling and interpretive elements, such as a significant white oak in the north parkette's grass, recognized by First Nations as a traditional navigational marker tree guiding towards water sources. The design seeks to incorporate Indigenous placemaking through collaborative discussions with Six Nations of the Grand River and Mississaugas of the Credit First Nation, aiming for designs that reflect their cultural interests and timelines.

03 Design Intent

Response to Site

The design's circular and organic shapes harmonize with the architectural elements, including the flowing canopies and smoothly curved exteriors. Features like semi-circular low seat walls, spiral stainless steel bike racks, circular tree grates, and picnic tables in the main courtyard, alongside columnar lighting and waste bins, are thoughtfully placed. Strategic plant placement enhances views and complements the building's façade, with large-scale vegetation foregrounding windowless sections.

The design promotes active living with a comprehensive pedestrian network and ample bicycle parking to encourage cycling. Curved walkways and green spaces invite exploration, and varied outdoor seating supports well-being through biophilic principles, offering both communal and private spaces. The north parkette features 'leaf' shaped outdoor rooms with benches and stone walls for group activities, while the courtyard offers shaded picnic areas under large trees, aligning with the building's aesthetics.

Biophilic design extends to nature-based solutions like pollinator gardens, green roofs, and rain gardens, all contributing to climate resilience and reducing urban heat. Diverse native plantings support ecological restoration and seasonal interest, with street trees chosen for their resilience and aesthetic value. These elements collectively enhance stormwater management and biodiversity, supporting a healthy urban ecosystem.

Overall, the site development for the Kitchener Indoor Recreation Complex is a holistic approach that prioritizes community engagement, environmental stewardship, and urban design. It creates a dynamic and inclusive space that encourages active lifestyles, social interaction, and a connection with nature, making it a valuable asset for the community.



Building Systems

The KIRC project has seriously examined the integration of structural, mechanical, electrical, and pool systems within the context of net-zero carbon requirements, as outlined by the Investing in Canada Infrastructure Program. This program underscores the necessity for innovative and sustainable infrastructure projects that actively contribute to a reduction in carbon emissions, promoting a clean growth economy and bolstering climate resilience. By closely examining how these core building systems can be designed and implemented to meet the program's net-zero criteria, we aim to shed light on the advanced methodologies and technologies that are pivotal in achieving such ambitious environmental goals. Through a detailed exploration of each system's potential to minimize energy consumption and maximize efficiency, the IPD team is providing a comprehensive understanding of the critical interplay between innovative design principles and environmental stewardship in the pursuit of this net-zero building.

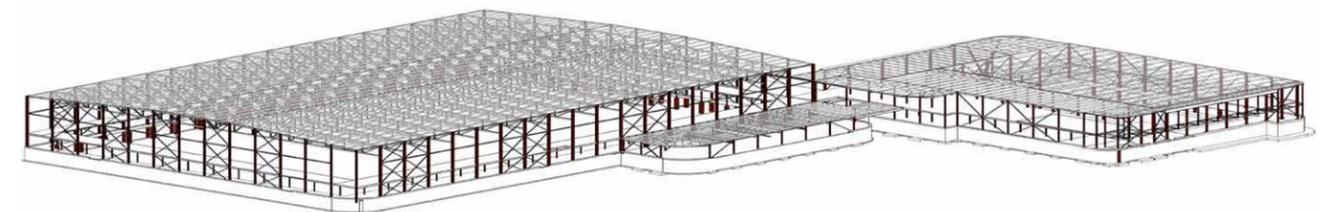
Electrical System

The facility's electrical systems are being designed to enhance power usage, lighting, fire alarms, communications, security, and more, with a focus on energy efficiency and future expansion capabilities. Enova Power will connect the new electrical service through existing and new infrastructure, leading to a customer-owned transformer that adapts utility voltage for the building's needs. The design includes provisions for electric vehicle (EV) charging stations and photovoltaic (PV) panel installations, integrating advanced lighting controls and LED fixtures to meet energy conservation goals and comply with local codes. Emergency lighting, a comprehensive fire alarm system, and a modern communication network using fiber-optic and Cat6 cabling will ensure safety and connectivity. Security features like access control and CCTV systems will monitor entrances and critical areas, while a paging system will facilitate in-building communication. This holistic approach not only supports current requirements with an expansive array of solar panels generating 560 kW of energy, but also paves the way for future technological integrations such as additional EV charging points, ensuring the building is well-equipped for evolving energy and communication needs.

Structural System

The aquatic area's ground level is designed with a 250 mm reinforced concrete slab, forming the pool deck above the basement, supported by a framework of concrete walls and columns, with additional support from beams in areas adjacent to the pool. The second floor incorporates a 165 mm thick structure, blending 89 mm of concrete with a 76 mm steel deck, reinforced by steel for general areas and adapted with 127 mm of concrete over a 38 mm deck for bleachers, all resting on steel supports.

Roofing across the facility is varied to meet specific needs, with a standard 76 mm steel deck for the pool and second-floor areas, supported by steel joists or beams. The multipurpose room features a similar structure but is designed to accommodate a green roof, adding ecological value. The Fieldhouse changerooms and the main Fieldhouse area use steel decking, with the latter distinguished by long-span trusses to cover large spaces efficiently. These roofing systems ensure durability and are tailored to the unique requirements of each section of the facility, blending strength with functional design.



Mechanical System

The building's systems are designed for durability and efficiency, featuring quality equipment from reputable manufacturers, with a focus on accessibility, weather resistance, and maintenance programs to extend lifespans. This includes an emphasis on vendors with "evergreen" policies for compatibility and longevity. The plumbing system integrates cold water distribution, electric hot water generation, recirculation, and water softening, prioritizing sustainable and safe fixtures. Fire safety is ensured through an automatic sprinkler system, standpipe system, and strategically placed fire extinguishers. The HVAC system, optimized for space function and air quality, includes high ventilation rates for specific areas, energy recovery units, and a geothermal system for primary heating and cooling, supplemented by electric boilers and air-cooled chillers. This system incorporates energy-saving measures like heat recovery and modulating equipment for peak efficiency.



Pool System

The lap pool is designed to be a carbon-neutral facility, featuring durable stainless-steel construction. The interior walls of the pool boast a #3 polish for a sleek look, while the shallow end's floor is uniquely textured with dimples to enhance slip resistance, ensuring swimmer safety. Accessibility is a key feature, with a barrier-free ramp and stairs in the shallow end, both equipped with grabrails for support. Additionally, the pool includes recessed ladders at both the shallow and deep ends, providing various entry and exit points for swimmers.

The lap pool is engineered for versatility and longevity, with a stainless-steel finish that reduces the need for frequent maintenance tasks like re-tiling or re-grouting, common in traditional tile pools. It is equipped for a range of aquatic programs, from recreational lap swimming with starting blocks to competitive events, supported by future-ready infrastructure for a built-in timing system and scoreboard. Special features cater to lane swimmers with visual impairments, such as spray mist systems at lane ends to signal the pool's boundary, enhancing safety and interactive learning experiences.

Parallel to the lap pool, the leisure pool embraces the same carbon-neutral ethos with its stainless-steel structure but differentiates itself with a soft, membrane-based floor system. This design choice prioritizes comfort and safety, offering a cushioned surface that mimics sand, ideal for reducing instructor fatigue during swim lessons. The leisure pool is outfitted with various amenities, including large teaching steps for easy access, a multifunctional shallow area for activities like aqua aerobics and swim lessons, and an accessible bench for relaxation. Interactive elements like a whale tail and water tunnel add fun, while a three-lane lap area serves dual purposes for warm-ups and beginner swim instruction, ensuring the facility meets a broad spectrum of community needs.

SWEALTH Targets v1.0
January 18, 2024



Sustainability

The KIRC project team is setting a new standard with this cutting-edge recreation complex! We’re pushing boundaries with our commitment to innovation, sustainability, and functionality. Our vision? A Net Zero Carbon complex that champions energy efficiency, slashes carbon, and leverages renewable energy, making KIRC one of the most environmentally sustainable recreation facilities in all of Canada.

But we’re not stopping there—we’re embracing holistic sustainability with adaptive, inclusive designs and operational innovations that are transforming the future of recreation.

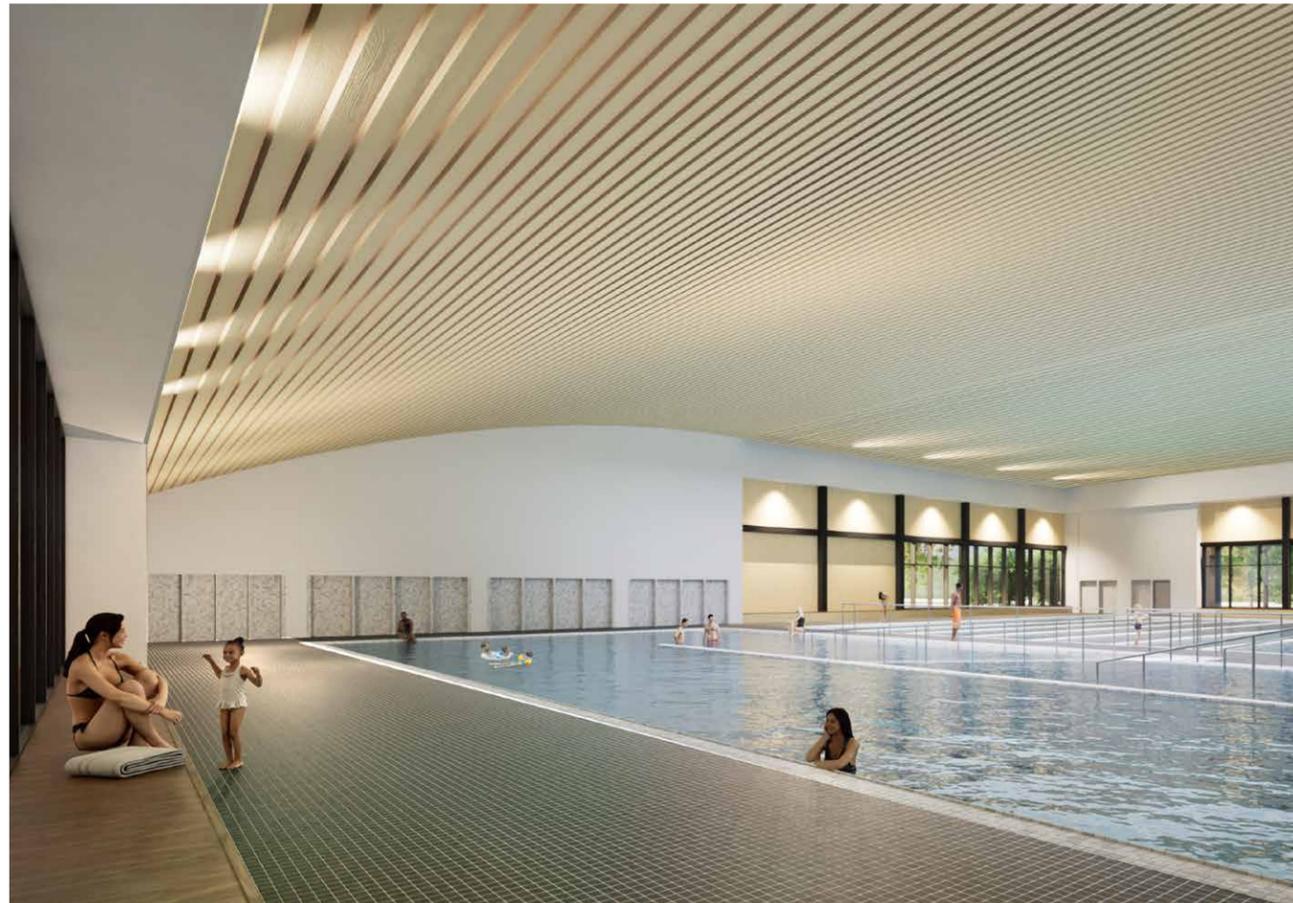
Based on current preliminary design documents for Site Plan Application, the design of KIRC meets each of the following items outlined within the Kitchener Official Plan:

1. Sustainable Development
2. Water Conservation
3. Energy Conservation and Generation
4. Air Quality
5. Waste Reduction and Management
6. Climate Change Mitigation, Adaptation, and Resilience

03 Design Intent

Sustainability

The KIRC project team has committed to the incorporation of innovation, sustainability, and functionality throughout the proposed recreation complex. The KIRC project is pursuing Net Zero certification under the Canada Green Building Council Zero Carbon Building Standard v3 – Design (ZCB – Design). Building design is governed by the achievement of an operational Net Zero Carbon balance, prioritizing energy efficiency, embodied carbon reductions, and renewable energy generation. Additional holistic sustainability and wellness objectives, including adaptive and inclusive design, operational efficiency, and innovation, have also been identified.



To track the project’s overall progress to these targets, a project-specific green design and construction standard was collaboratively developed by the project team. This standard, designated as the “SWealth” Matrix, incorporates Sustainability, Wellness, and occupant Health measures promoted by leading industry green building standards and supported by scientific research and evidence. Features included in the SWealth Matrix fall under one of six main categories, as follows:

- **Energy & Carbon:** This category addresses energy and carbon from a holistic perspective, including measures to reduce operational energy use and carbon emissions, minimize embodied carbon from all sources, and enhance building resilience and operations.
- **Indoor Environmental Quality:** This category focuses on enhancements to the built environment, ensuring the comfort of all workers and visitors within the building. Measures are focus on developing and maintaining good indoor air quality, providing ample lighting, acoustic consideration, and thermal comfort.
- **Ecology & Biodiversity:** This category addresses all site development, including hardscape, landscape, and roof features. Measures are focused on increasing native landscaping and pollinator habitat, reducing heat island effect, and minimizing disruptions to nature from human activity onsite.
- **Accessibility & Wellness:** The intent of this category is to provide support to visitors and long-term occupants of the facility, ensuring their ongoing comfort and inclusion.
- **Water Use:** This category addresses water use and quality holistically. Measures cover the quality and availability of water within the building, as well as stormwater reuse and potable water management.
- **Circular Economy & Waste:** This category aims to reduce waste and leverage the circular economy throughout design, construction, and operations. Measures are focused on reducing waste sent to landfill throughout the building’s life.

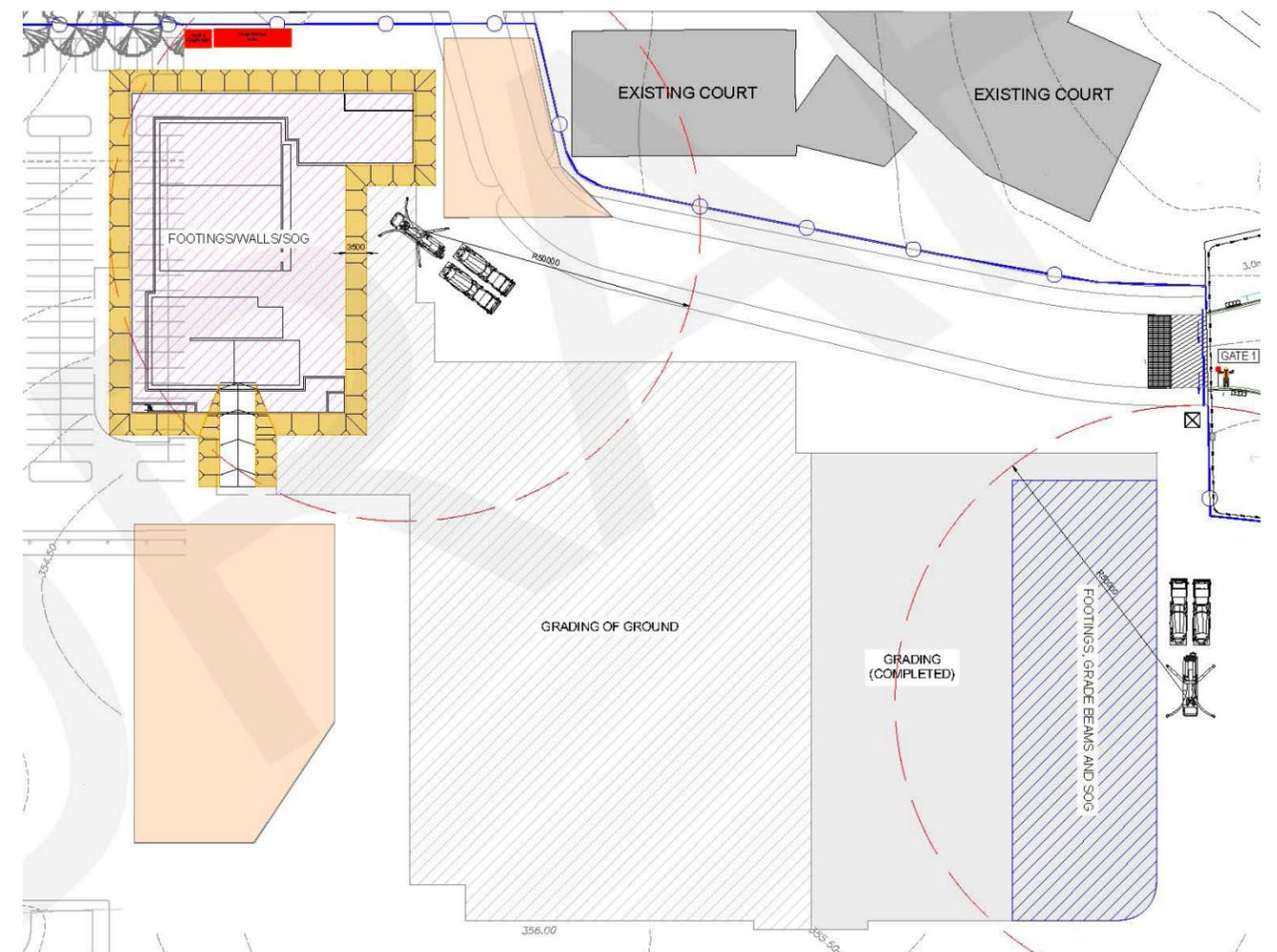
An additional innovation category is also included, to address any items that are not covered under the base categories.



Construction Sequencing

Phase 1:

Site clearance will be undertaken to prepare the site for excavation. The focus of the initial excavation is the Aquatic Centre which will then focus on the construction of the foundations, walls. While this is being completed, detailed excavation for the foundations for the field house will be undertaken in parallel for schedule efficiency.



03 Design Intent

Construction Sequencing

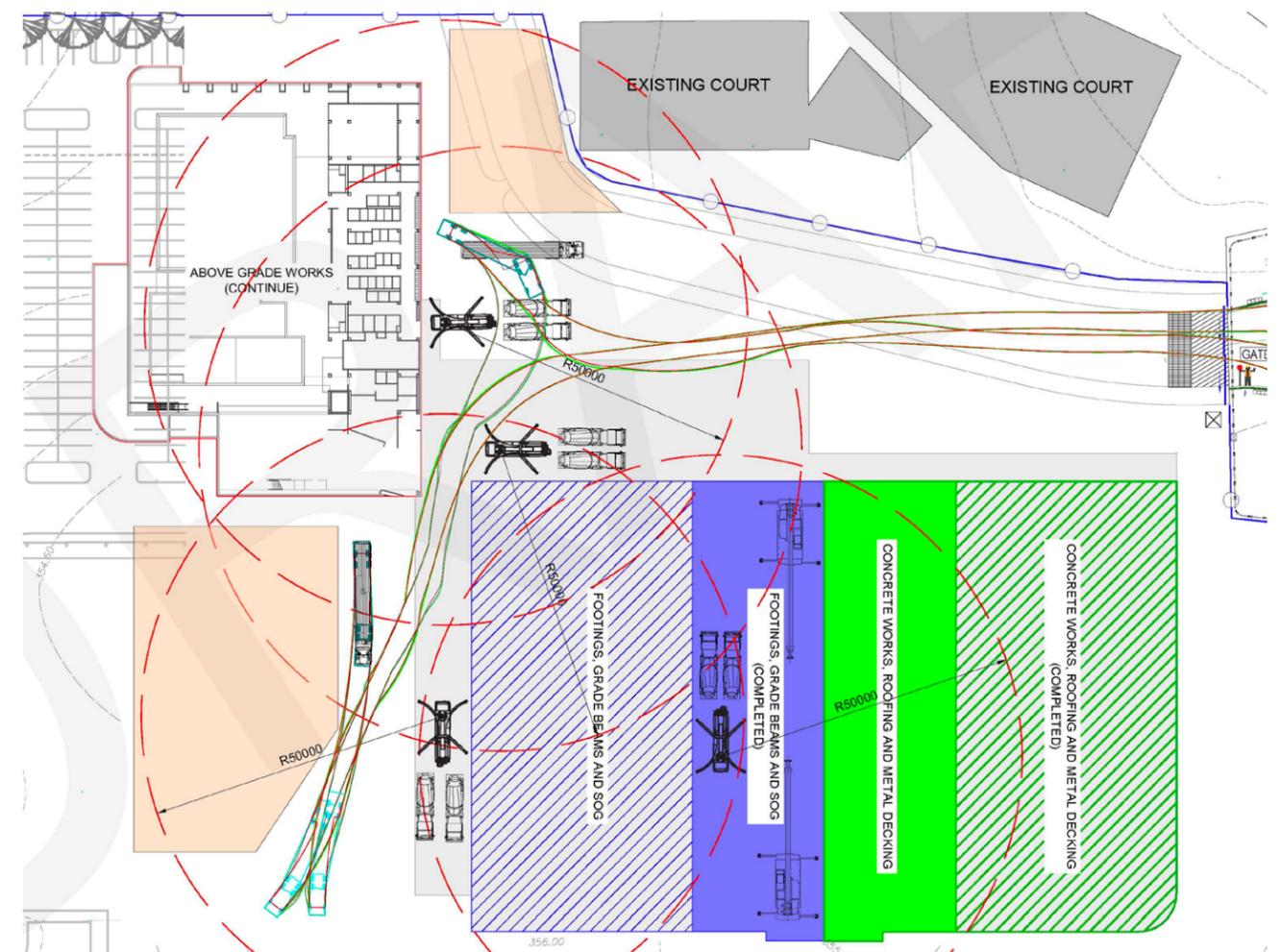
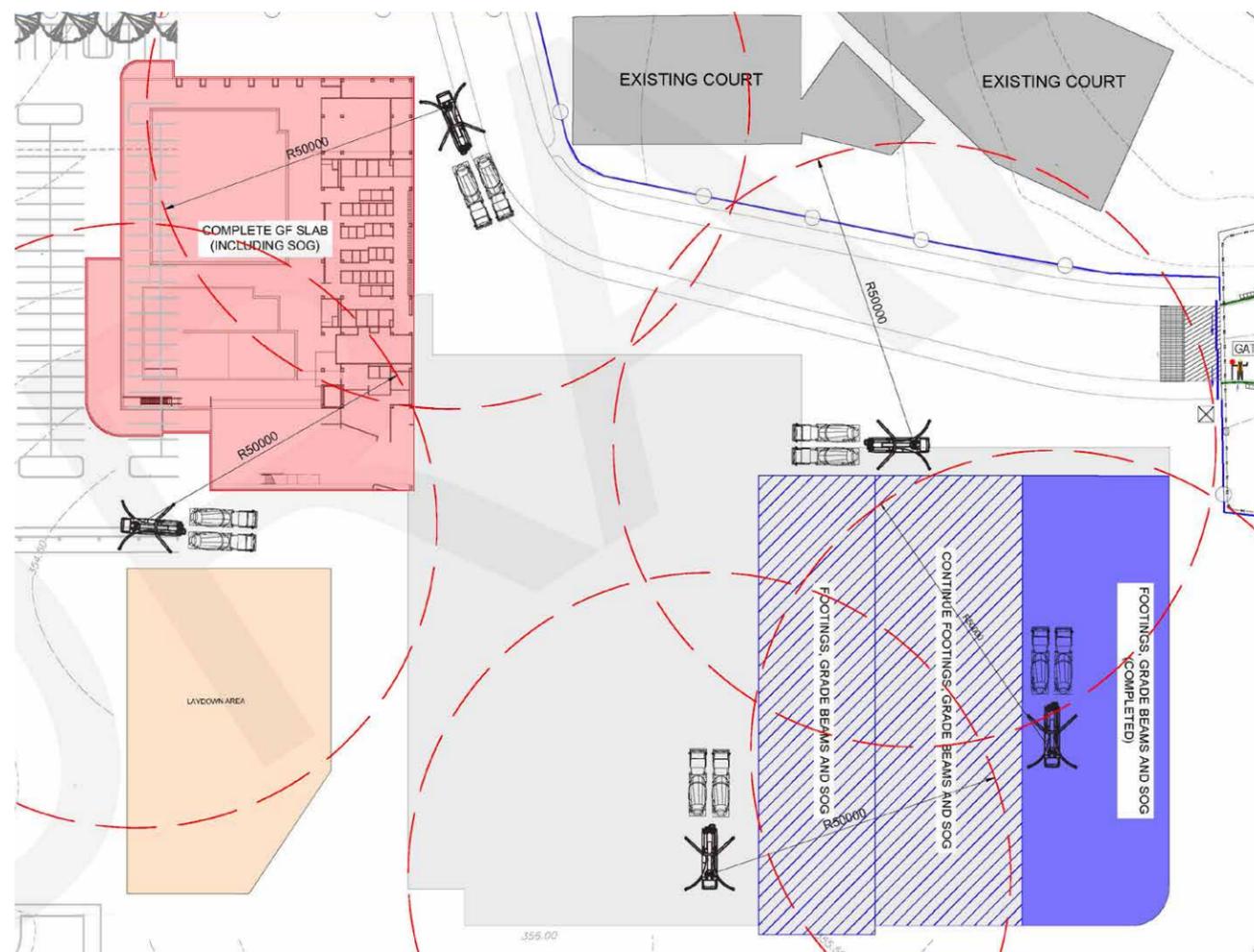
Phase 2:

Once Phase 1 is completed, the main steel structure will be installed in the Aquatic Centre (in red) while foundations for the Field House are installed in a sequential direction from east to west (blue).

Phase 3:

As the Steel Structure continues to be erected, the metal deck will be installed, and concrete poured for the upper level of the Aquatic Centre. The Roof, Envelope and initial MEP installation will commence once the Steel Structure is completed. The installation of the Main Entrance Atrium will also be well undertaken at this stage.

In the Field House area, as the foundations are completed, the Steel Structure will start to be installed, followed by the Roof installation.

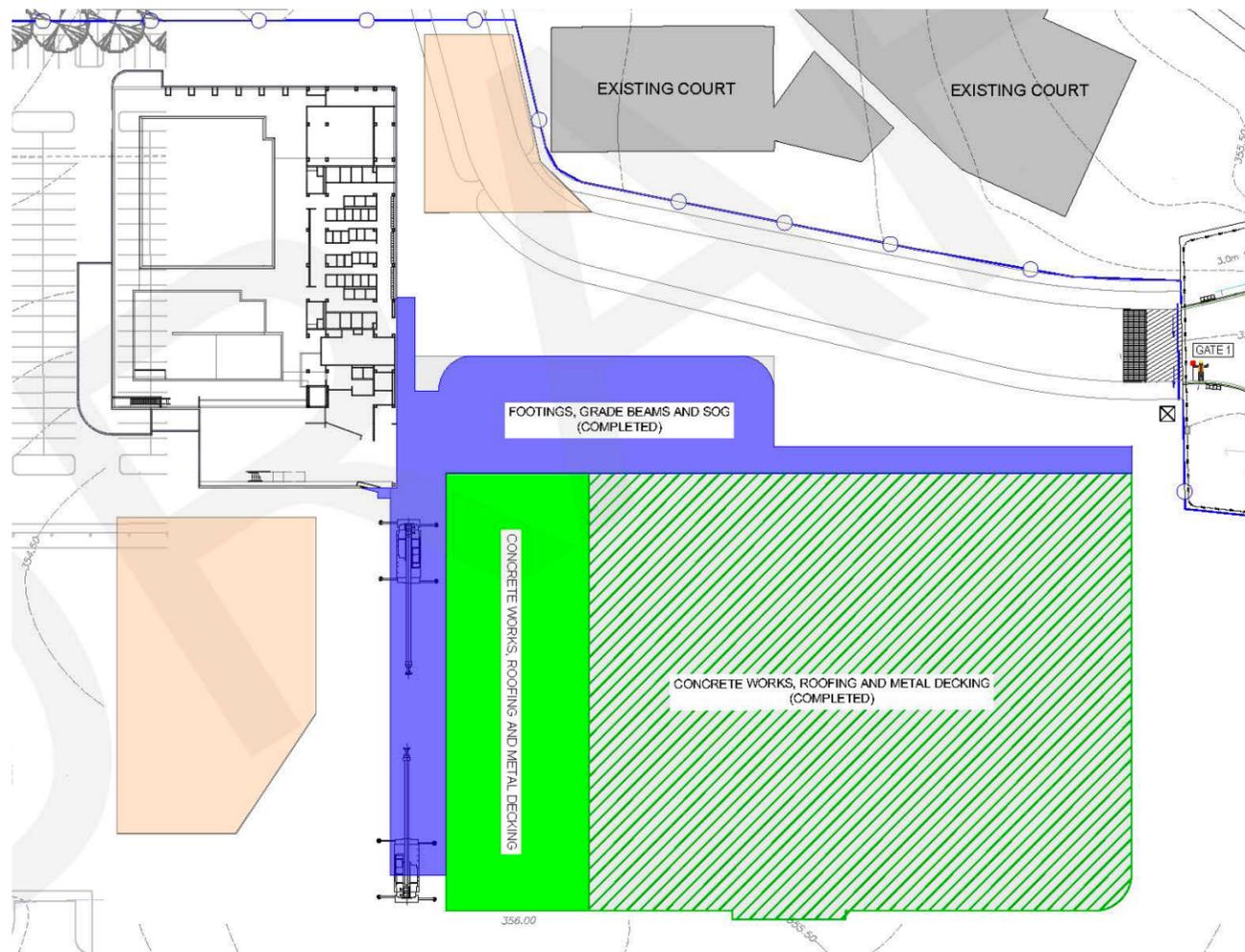


Phase 4:

MEP Installation will be nearing completion in the Aquatic Centre with Finishes will be well underway by this stage including equipment. This includes Drywalling, Painting, Flooring Installation and then final Trim and Millwork.

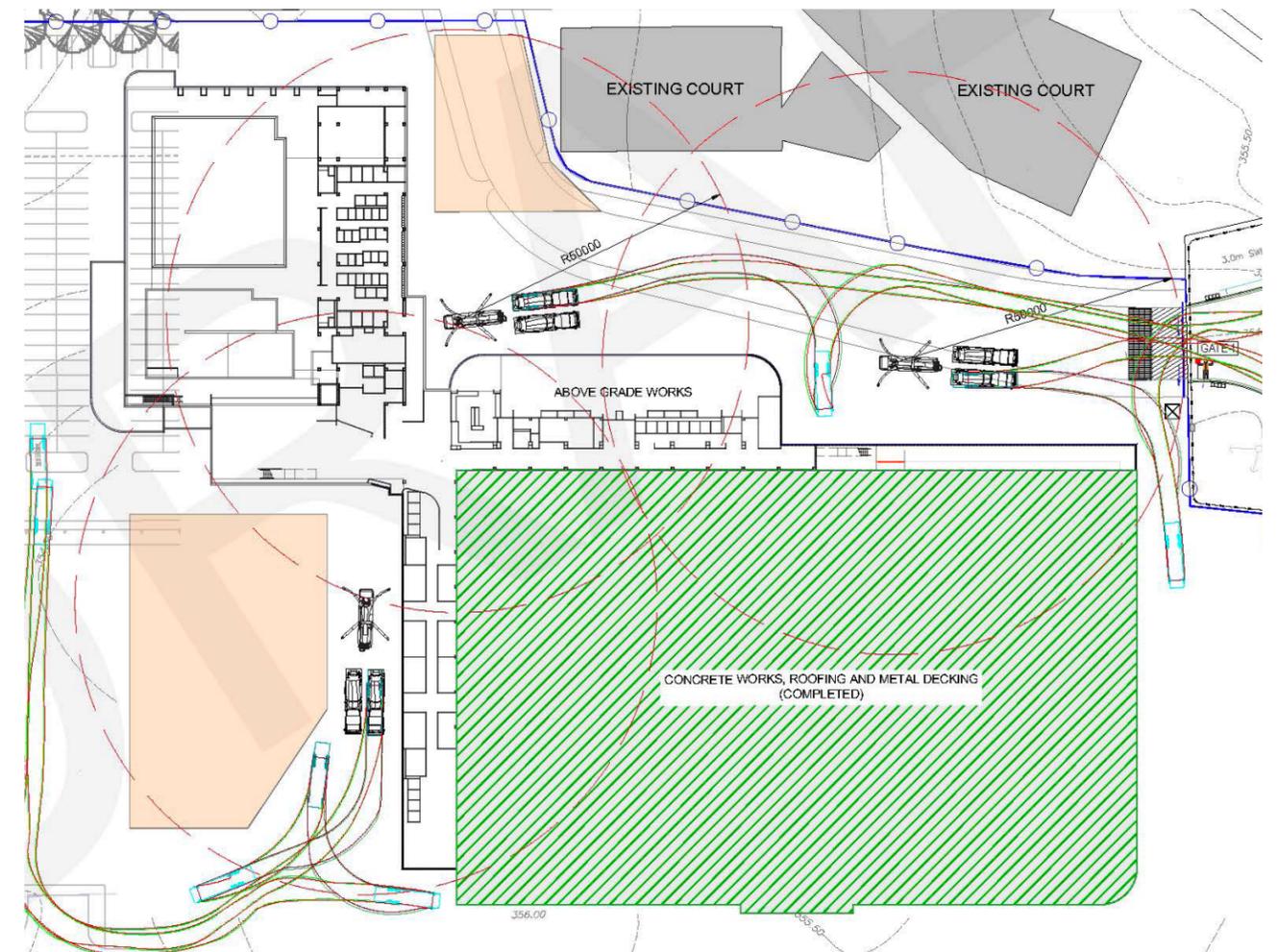
The Field House will be nearing completion of the Metal Deck and Roofing while internally the High Level MEP Services are installed. The Facade will be wrapping around the building from East to West moving towards the Aquatic Facility.

The Multipurpose Rooms and the Circulation Areas foundations and Concrete Slab will be completed with the Steel Structure progressing to being almost complete.



Phase 5:

During this Final Phase, internal Finishes within both the Aquatic Centre and Field House will be heading towards completion. The parking and roading infrastructure will also be constructed in parallel with Landscaping being completed as part of the final section of the project prior to substantial performance.





Project Cost Summary

Target Cost Summary

Opportunities and Risk Mitigation

Confirming the Vision

Construction Escalation

Omissions

Program and Space Optimization

04

04 Project Cost Summary

Target Cost Summary

Target Cost Summary

At the outset of this Integrated Project Delivery project, the Team's primary focus was to rigorously test the business case. This critical examination took place within the collaborative environment of the Big Room, where the team members, including architects, engineers, contractors, and the City of Kitchener staff, co-located to foster open communication and integrated decision-making. It was during these formative weeks in the Big Room that the team uncovered oversights in the original business case, including gaps in the project scope and deficiencies in the planned program, which had not been adequately addressed.

Recognizing these challenges, the team quickly acknowledged that adhering to the initial project budget of \$97 million would not be possible. With a view to designing and delivering a better building to meet current and future community needs, the situation necessitated a strategic pivot towards redefining a Target Cost that would; address the identified gaps, encompass a holistic view of the project, and take into consideration all its complexities and requirements. This shift in approach was essential to ensure that the project's scope, quality, and objectives would not be compromised.

With a four-month deadline to achieve cost and schedule certainty, the team embarked on an intensive phase of the project. This Validation phase involved deep dives into the design, stakeholder consultations, and rigorous cost evaluations. **At its highest, in early Validation, the Complex was estimated to cost \$158,746,000 (inclusive of non-refundable HST).** The team engaged in numerous design iterations, each time refining and aligning the project's elements with the overarching goals, stakeholder expectations and driving cost efficiency. Detailed room by room walkthroughs were conducted to understand the full extent of the construction scope and every aspect of the building was accounted for in the cost estimate.

This exhaustive process led to the development of **a final Validation cost estimate of \$145,262,000 (inclusive of non-refundable HST)**, a figure that was reached through careful consideration of the project's needs, market dynamics, and the insights gained from consulting the trade market. This revised estimate reflects a comprehensive budget that includes all direct trade costs, general requirements, price escalations, and contingencies for both design and construction. It also accounts for all soft costs, all overheads, ensuring that every financial aspect of the project is covered.

Now, with a true and aligned understanding among all team members and stakeholders, the project is poised to move forward confidently. The collaborative efforts and the rigorous process of evaluation and adjustment have culminated in a cost and project plan that all parties believe in, laying a solid foundation for the successful execution of the project. This milestone marks a significant achievement for the team, demonstrating the effectiveness of the IPD approach in navigating complex challenges and achieving alignment and consensus among diverse project stakeholders.

With the project being estimated at \$145,262,000, the Integrated Project Delivery (IPD) Team for the Kitchener Indoor Recreation Complex is equipped and committed to finding further savings and stretch to an ambitious Target Cost of

\$143,820,000*

Construction will begin in May 2024, achieving occupancy by Summer 2026.

This timeline and budget reflect our dedication to collaboration, efficiency, and excellence in bringing this project to fruition.

*Should Council elect to alter the scope of the project (ie. program changes), then the project will be re-validated and a new Target Cost set.



Opportunities and Risk Mitigation

The integrated nature of **IPD promotes a transparent and cooperative environment where risks and opportunities are managed collectively.** This leads to more effective risk mitigation strategies and the ability to capitalize on opportunities, ultimately contributing to the success of the project.

In Integrated Project Delivery (IPD) projects, risk and opportunity management is a collaborative and transparent process that involves all key stakeholders, including the Owner, Architect, Contractor, Consultants and Trade Partners from the project's inception. This approach ensures that all parties share a common understanding of project goals, risks, and opportunities, leading to better-informed decisions and a more cohesive project team.

Risk management in an IPD project begins with the proactive collective identification and assessment of potential risks by the project team. This includes risks related to design, construction, budget, schedule, and any external factors that might impact the project. The team uses tools such as risk registers and regular risk assessment meetings to continuously monitor and update the status of identified risks. One of the key features of IPD is the shared risk and reward model, where financial incentives are aligned with project outcomes, encouraging all parties to proactively manage and mitigate associated cost of those risks resulting in a decreasing risk pool as the project progresses.

In the event of a force majeure, such as natural disasters or pandemics, within an Integrated Project Delivery (IPD) framework, the owner may face responsibilities and risks. These unforeseen circumstances would necessitate an immediate assessment of the project's scope, schedule, and budget. A key aspect of managing these disruptions involves the financial implications, where the cost burden of the force majeure event typically falls on the owner. Effective communication and a collective approach to developing a recovery plan are crucial in ensuring that the project aligns as closely as possible with its original objectives, despite the challenges posed.

Opportunity management, on the other hand, focuses on identifying and leveraging potential advantages that can improve project outcomes. This could include innovative construction methods, sustainable building practices, or advanced technologies that enhance efficiency or reduce costs. In an IPD project, opportunities are evaluated collectively by the team, considering their impact on project goals and the shared vision. This collaborative approach ensures that opportunities are fully explored and implemented in a manner that benefits the project as a whole.

Confirming the Vision: Optimizing the Kitchener Indoor Recreation Complex and Schlegel Park Project

An Enhanced Design

The current design for KIRC has undergone an extensive enhancement process, aligning closely with the evolving needs of the City's residents. Phase 1 (2024-2026) of the project will not only include all elements outlined in the original council-approved business case, such as the pool, indoor turf, and designated community spaces, but also boasts several significant enhancements. These enhancements encompass a larger aquatics center featuring two pools, a FIFA-standard size turf fieldhouse divisible into four playing areas, an added walking track encircling the perimeter of the turf fields, an indoor cricket batting cage, and a second-floor expansion housing the walking track and viewing areas overlooking the pools. The size and quantity of multipurpose rooms have been augmented, while a meticulously redesigned layout ensures a superior user experience and enhances operational efficiency. Notably, the facility's footprint has expanded by an impressive 75%, underscoring the project's commitment to accommodating the diverse needs of the community.

Furthermore, Phase 1 lays the groundwork for Phase 2 (TBD), which anticipates the addition of a gymnasium to address the escalating demand for court and gym space, catering to sports like basketball, badminton, volleyball, and pickleball. Detailed designs for Phase 2 will be completed concurrently with Phase 1, positioning the City to pursue future federal or provincial funding opportunities seamlessly.

Meets Current & Future Community Needs

KIRC is poised to comprehensively address the current and future needs of the community. Recognized as top priorities in the 2019 LFMP, the aquatic center and indoor turf facilities had been strategically earmarked by City Council to meet the growing demand for indoor recreational spaces. With city pools currently operating at 98% capacity and persistent program waitlists, KIRC's expansive offerings aim to alleviate overcrowding and foster accessibility to new programming opportunities. In contrast to the limited capacity of the city's sole existing indoor facility at Budd Park, which is only one-fifth the size of KIRC's fieldhouse, the latter promises enhanced programming capabilities for various sports groups. KIRC's provision of office space for the Kitchener Soccer Club which boast a membership of over 5,600 players, underscores its commitment to supporting local sports organizations.

Projections estimate 380,000 visitors in the inaugural year alone, a testament to the anticipated community engagement and utilization of KIRC's facilities, with anticipated growth in subsequent years. Setting a regional benchmark, KIRC's indoor turf will be the sole FIFA-recommended standard size facility in the region, and one of only five across the province, enhancing its appeal and utility. Endorsed by key stakeholder groups, the design and amenities of KIRC reflect a collaborative effort to ensure alignment with community needs and preferences. Demonstrating forward-thinking planning, KIRC is not merely designed to meet present demands but also incorporates infrastructure and plans for the gymnasium in Phase 2, positioning it as a 'shovel-ready' project primed for future expansion.

Supports the Recreation Needs of Equity-Deserving Residents

KIRC is dedicated to supporting the recreation needs of all residents, particularly equity-deserving residents. KIRC will offer a diverse range of recreation options to residents, with the fieldhouse accommodating sports such as soccer, cricket, football, lacrosse, rugby, field hockey, or track and field, fostering inclusivity and accessibility across various athletic interests. Moreover, the complex will provide more affordable recreation opportunities for lower-income residents, with activities like swimming and soccer being two of the more affordable activities, ensuring equitable access to health and wellness pursuits. The inclusion of a walking track addresses a significant need among older adults, offering a safe and accessible space for physical activity and social engagement. Additionally, the new aquatic center will enable the City to expand directed programming to support the integration and participation of new Canadians, across all existing indoor pools in the City.

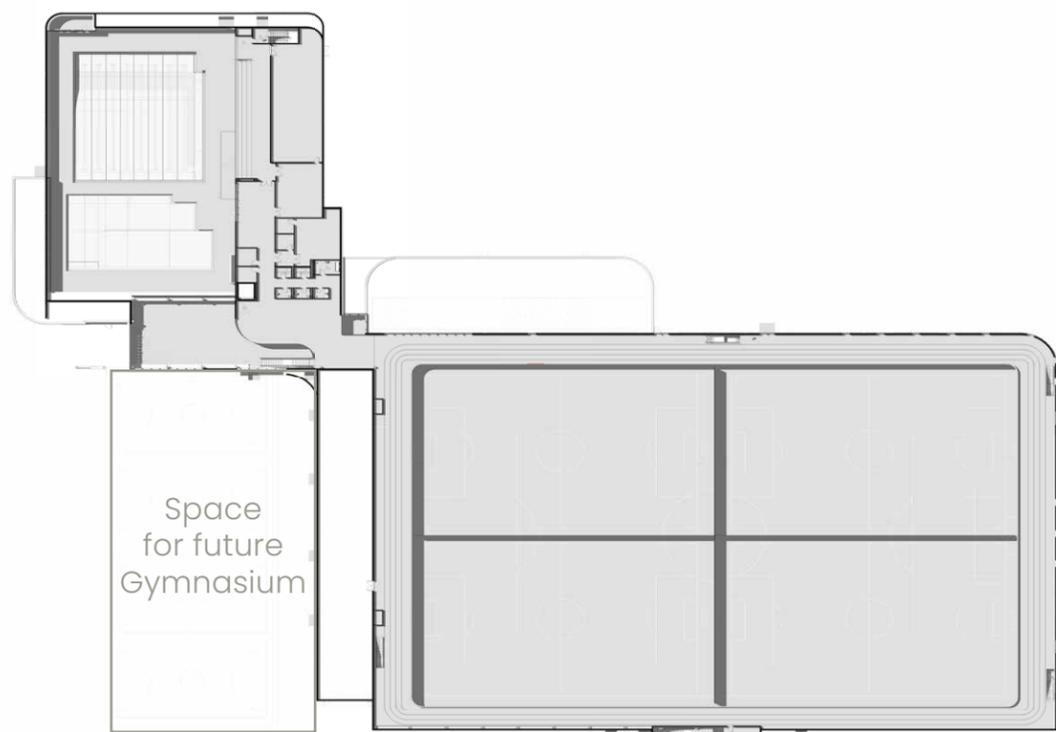
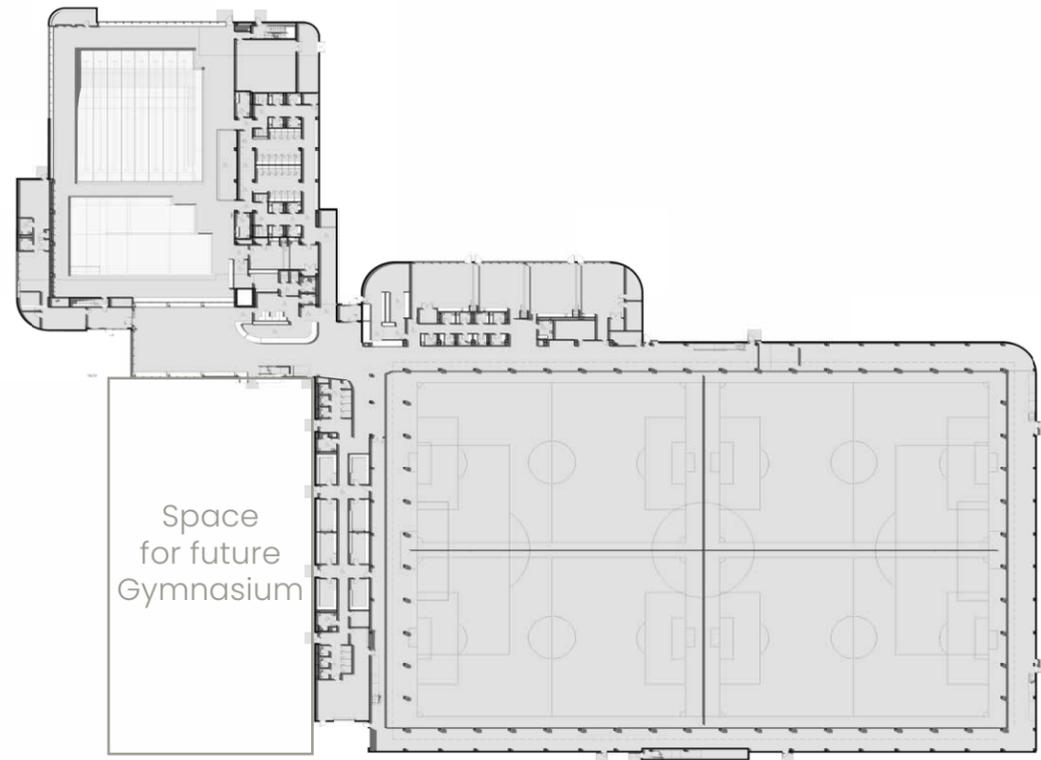
Program and Space Optimization

The initial business plan outlined a facility spanning 110,000 square feet, segmented into a 45,000 square foot Aquatic Centre and a 65,000 square foot Fieldhouse. However, to fulfill the comprehensive program requirements, the building has expanded by 80,000 square feet, now totaling 190,000 square feet. This expansion is predominantly in the Fieldhouse section to accommodate a full-size FIFA soccer field.

The escalation in the building's footprint extends beyond the Fieldhouse. It encompasses the planning and development of several critical spaces that were not fully detailed in the initial business case. These areas include, but are not limited to, changing rooms, team spaces, locker areas, administrative offices, and restroom facilities. The project team has invested significant effort in refining these spaces to enhance operational efficiency and to adhere to the City of Kitchener's stringent accessibility standards. Such enhancements involve the incorporation of broader passageways and the expansion of rooms to improve accessibility, ensuring ample space for larger turning radii and overall mobility within the facility.

The building has been thoughtfully designed to allow for the integration of a future gymnasium, ensuring that the structure can adapt to evolving community needs and program expansions without requiring extensive modifications.

The Integrated Project Delivery team remains confident that the ongoing design development process has effectively tailored the building's dimensions to meet the City of Kitchener's operational needs and goals. This alignment guarantees that the facility is poised to serve the immediate and long-term needs of the community, embodying a versatile and inclusive space for various activities and events.



04 Project Cost Summary

Comparison with Industry Benchmarks

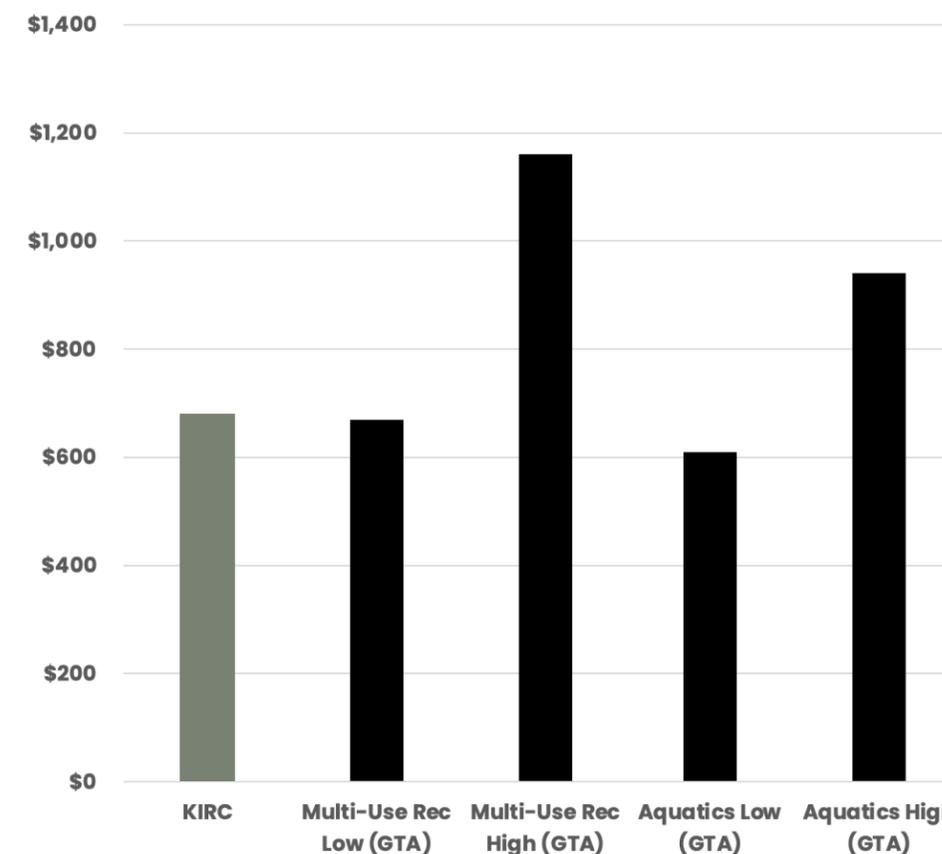


Comparison with Industry Benchmarks

In the Canadian construction sector, the Altus Canadian Cost Guide is a pivotal benchmarking resource, offering comprehensive insights into construction costs across various regions of the country. Specifically designed for Institutional, Commercial, and Industrial projects, the Guide draws on data from 2,793 projects, representing over \$120 billion in construction expenditures. The 2024 edition of the guide has recently been released, setting forth a benchmark for Multi-Use Recreation Centres in the Greater Toronto Area (GTA) with an **expected construction cost range of \$680 to \$1,160 per square foot**.

When evaluating the proposed Kitchener Indoor Recreation Complex (KIRC), it's essential to compare costs on a consistent basis. This necessitates the exclusion of soft costs from the estimate since these expenses are generally not included in direct construction costs. After adjusting for these soft costs, the **KIRC's construction cost comes to \$683 per square foot**, positioning it at the lower end of the spectrum for similar projects within the GTA. This is noteworthy when also compared to Aquatics Centres.

This comparison underscores the efficiency and value the Integrated Project Delivery (IPD) team has infused into the KIRC project. By achieving a cost that aligns with the lower end of the benchmark range, especially in the context of rising construction costs and sophisticated project requirements, the team has demonstrated a commitment to cost-effectiveness without compromising on quality or functionality. This careful balancing act ensures that the KIRC will not only meet but exceed community expectations, providing a state-of-the-art facility that aligns with financial sustainability and strategic planning goals.





RECEPTION

Project Schedule

KIRC Project Schedule

05

Kitchener Indoor Recreation Complex Schedule

The construction strategy is designed to segment the project into two primary sections: Area 1, which will house the Aquatic Centre, Multifunctional spaces, and parts of the pedestrian pathways, and Area 2, which will feature the Fieldhouse along with additional pathways. The plan is to initiate the build-out in Area 1, moving methodically from the north end to the south, before shifting focus to Area 2, where construction will advance from the west to the east.

A pivotal point in our project timeline is securing the site alteration permit by early April 2024. This key permit will green-light the early stages of site preparation as we transition into late spring 2024, encompassing essential mobilization and groundwork activities. Following this, the excavation and leveling efforts are poised to begin in June 2024, setting a solid foundation for both designated areas. This approach ensures a synchronized six-month period for laying the foundations and constructing the basements, paving the way for the structural steel framing to start in Area 1 by mid-October 2024.

In tandem with the steel framing, the introduction of metal decking and concrete activities will take place, following the predetermined sequence. The façade installation is expected to commence by January 2025, closely following the completion of the decking phase. This stage will also signal the start of critical Mechanical, Electrical, and Plumbing (MEP) work. Once Area 1 is fully enclosed by mid-May 2025, we will embark on the interior finishing touches, with Area 2 mirroring this sequence in a staggered manner to maximize efficiency and maintain a seamless construction flow.

Our overarching goal is to complete the construction within a 24-month timeframe, aiming for substantial completion by Summer of 2026. However, in line with our commitment to collaboration, efficiency, and the principles of Lean Construction, we are setting an ambitious stretch target for occupancy by Spring of 2026. By harnessing the collective expertise of our team and focusing on finding synergies and efficiencies at every stage of construction, we will target an accelerated timeline while maintaining the highest standards of quality and precision.

The project team has successfully implemented a powerful schedule management technique, called the Last Planner System. This technique will be expressly used for the Kitchener project. Pull Planning, a key component of the system, involves harnessing the collective input of the project team to identify barriers and constraints affecting the schedule.

The project team can then effectively work together to overcome those identified barriers. The project team has also used pull planning throughout validation and have realized considerable benefits in terms of schedule impact and completing validation, while supporting several more design concept iterations than anticipated under the original schedule. In true Integrated Project Delivery (IPD) fashion, the entire team works in a partnership structure with each other to achieve optimal process flow on the job site.

This can be accomplished because the team makes reliable commitments to each other, which are rigorously tracked and measured using Planned Percent Complete (PPC) metrics. The philosophy of continuous improvement, collaboration, identifying root causes, and removing roadblocks for the team on-site makes the project delivery system the best in the industry for this project.

Other important scheduling/planning tools the team will utilize include:

- Bi-weekly look-ahead planning,
- Weekly work plans,
- Six week look-aheads,
- Pre-fabrication & modularization,
- Early and sequential material procurement
- BIM and lean planning principles.

The Indoor Recreation Complex schedule that has been presented on the following page reflects a project that will achieve occupancy a full year ahead of a project that is traditionally delivered. Cost certainty is also understood over a year ahead of a traditional project.



Conclusion

06



KITCHENER

KITCHENER



Conclusion

The KIRC project at RBJ Schlegel Park stands as an example of the City’s commitment to meeting the current and future needs of residents, particularly those from equity-deserving communities. The KIRC project represents a significant stride towards fostering community well-being, environmental sustainability, and urban enhancement. The project’s comprehensive approach, integrating advanced design principles, sustainability measures, and community feedback, underscores its commitment to not only providing recreational facilities but also to enhancing the overall quality of life for the community. By prioritizing community need, the project ensures that the needs and desires of local residents are reflected in the final outcome, thereby fostering a sense of ownership and pride among community members.

To further underscore the project’s success, the effectiveness of the Kitchener Indoor Recreation Complex’s program elements cannot be overstated. From the aquatic centers designed to cater to both competitive swimmers and families looking for fun, to the versatile sports facilities that accommodate a wide range of athletic activities, each component will be crafted to meet the community’s diverse needs. Multipurpose rooms will provide space for a multitude of uses and the track provides an indoor option for cardio exercise.

Environmental stewardship is another cornerstone of the KIRC project, with attention paid to sustainable design and construction practices. The project leverages cutting-edge technologies and sustainable materials to minimize its environmental footprint, while also enhancing the site’s natural beauty and ecological value. This commitment to sustainability is evident in the project’s energy-efficient net-zero systems, use of renewable resources, and integration of green spaces, which collectively contribute to a healthier, more sustainable community environment.

Moreover, the KIRC project stands as a testament to innovative urban design, creating a dynamic and inclusive space that encourages active lifestyles, social interaction, and a connection with nature. The thoughtful layout and design of the complex not only cater to a wide range of recreational activities but also seamlessly integrate with the surrounding parkland, strengthening the bond between the community and its natural environment. As a valuable asset to the community, the KIRC project exemplifies how thoughtful planning and design can transform public spaces into vibrant, inclusive hubs that enhance the social fabric of the community.

The team’s commitment is further exemplified by its pursuit of an ambitious stretch target cost of \$141,330,000, a testament to their ability to balance ambitious architectural and functional requirements with financial pragmatism. This target, coupled with a clear timeline that sees construction beginning in May 2024 and occupancy by Summer 2026, underscores a well-orchestrated effort to bring this visionary project to life. The IPD team’s focus on collaboration, efficiency, and excellence has been a driving force in ensuring the project’s progress, adhering to a schedule that promises to deliver a state-of-the-art facility to the Kitchener community.

Moving forward, the IPD team remains unwavering in its resolve to drive costs down further through the IPD process. The inherent flexibility and collaborative spirit of the IPD model provide a solid foundation for ongoing cost optimization strategies. By continuously engaging in value management, leveraging technological advancements, and fostering a culture of innovation, the team is well-positioned to identify and implement cost-saving measures without compromising the project’s quality or scope. This commitment to financial stewardship, alongside the team’s dedication to excellence, ensures that the Kitchener Indoor Recreation Complex will not only be a landmark project in terms of design and functionality but also a benchmark for efficient project delivery and fiscal responsibility.



KITCHENER

KITCHENER INDOOR RECREATION COMPLEX