

Reshaping Canada's Second Home:
How Social Collaboration can be Promoted by the Adaptive Re-Use of an Old Community Rink

by

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Fig. 1 Pathways in Exhibition Park.

Abstract

Community, Socialize, Versatile, Adaptive Re-use, Guelph, Exhibition Park
-Keywords

Given Canada's northern climate, winter sports and particularly skating, have assumed tremendous cultural importance, yet nearly half of the skating facilities in the country are approaching or have reached their life expectancy. This owes to the interrelated challenges of the expense of maintaining rinks and arenas, and the fact that they are only used during a few months of the year. This thesis takes the position that the adaptive reuse of an existing arena to host multiple programs is the most culturally and environmentally sustainable response to serve the surrounding community. Founded in Guelph, Ontario, in 1871, Exhibition Park is a well-used public park offering an assortment of recreational amenities and community-inclusive programs. However, the latent potential of the park's dated arena merits exploration. This thesis proposes the adaptive reuse of Exhibition Park Rink into a dynamic year-round cultural centre that provides an improved skating experience, alongside complementary community programs.



Fig. 2 Exhibition Park

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Fig. 5 Ruin in Guelph, ON.

Introduction

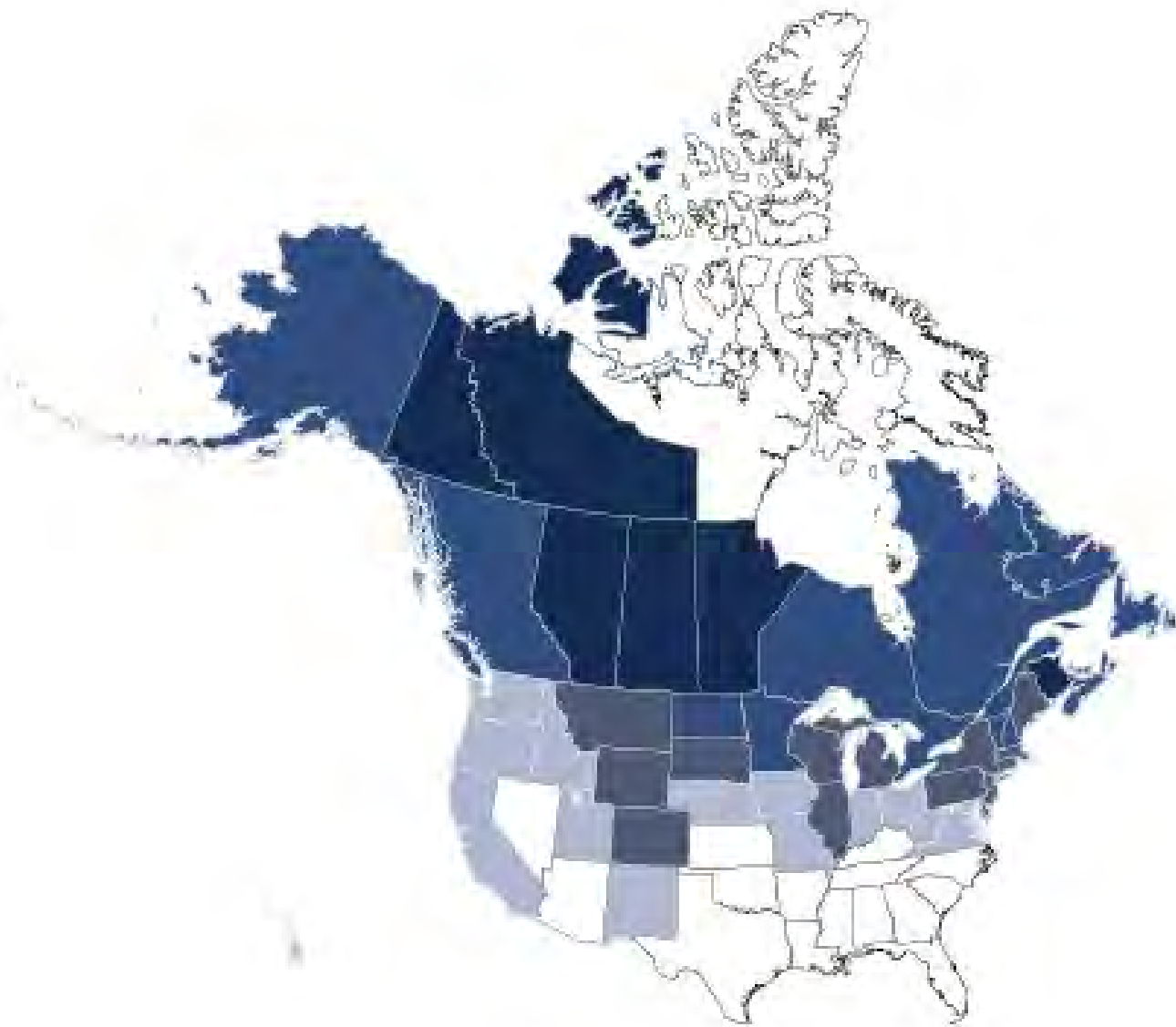
Investment in public centers and the house of sport aids in fostering local connections and urban reclamation of the community core and public programs. Historically, Canadians are passionate about sport and competition in winter events, and cheering collectively brings communities together. This stems back to 1875 where what is thought to be the first 'arena' was built, Victoria Skating Rink in Montreal QC.¹ While there were skating rinks previous to this arena where people would come together and participate in public skating events, the concept of the arena comes from adding spectator stands and seating to watch the events happening on the ice. This creates an event focused building typology for the use of the surrounding community. This was the beginning of the contemporary arena as a social space that has a relationship between the players playing the game, and the viewers watching a hockey game or skating event, and having the ability to engage in a social context apart from the event itself. The site of the community centre and the urban connection a centre has is just as important as the interior of the building itself.

There is a human need to celebrate sports that dates back to ancient Rome and the Colosseum building. Shubert references this by writing; “a community of free citizens communes within a parking lot (agora) and proffers barbecued meats (sacrifices) to their sports heroes (gods) at the foot of the stadium (temple) (see Figure 6).”² The theme of a stadium as a temple speaks to the importance of the house of sport as a place for urban gathering to support the local belief of the hometown team, or community event. Creating an adaptable and versatile social space is critical for community growth and sustainability, as a neighbourhood needs specific space to explore internal social opportunities that isn't forced upon a user.

Though local rinks have an important role in the growth of Canadian communities as their purpose was to serve at the neighbourhood context, their cost to maintain is becoming more expensive, and as a result, they are being neglected and decommissioned. This is leaving numerous communities with old inoperable rinks, when they have upside to be catalysts for social engagement to serve for the community.

Fig. 6
Pompeli Arena.





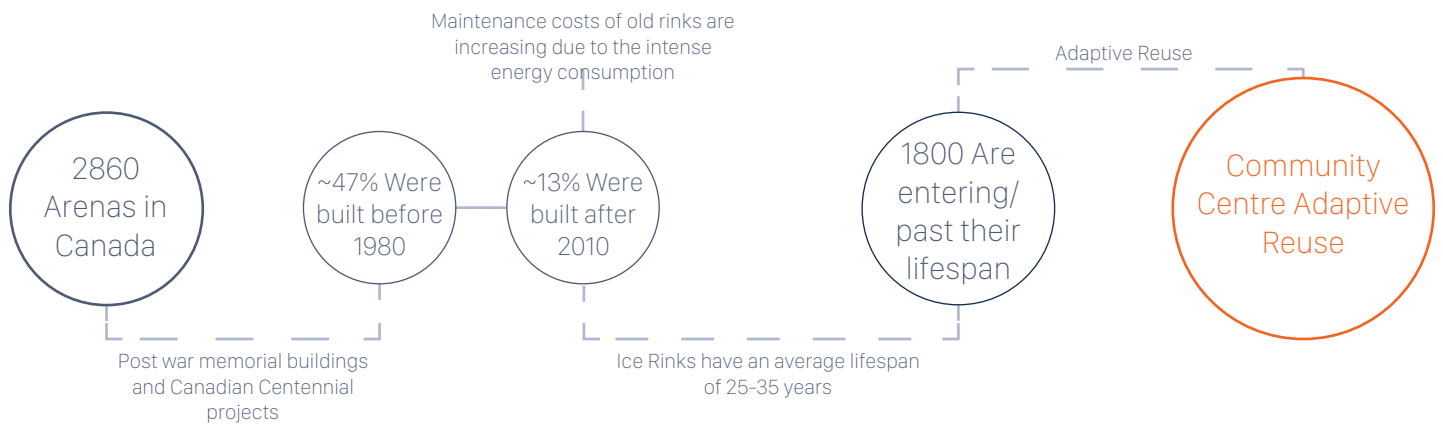
- 4K - 10K Ice Rinks per Capita
- 10K - 60K Ice Rinks per Capita
- 60K - 240K Ice Rinks per Capita
- 240K - 800K Ice Rinks per Capita
- 840K or No Rinks per Capita

Fig. 7
Arena density in Canada and the USA..

So, how can social and communal collaboration be promoted from the adaptive re-use of an old community skating rink?

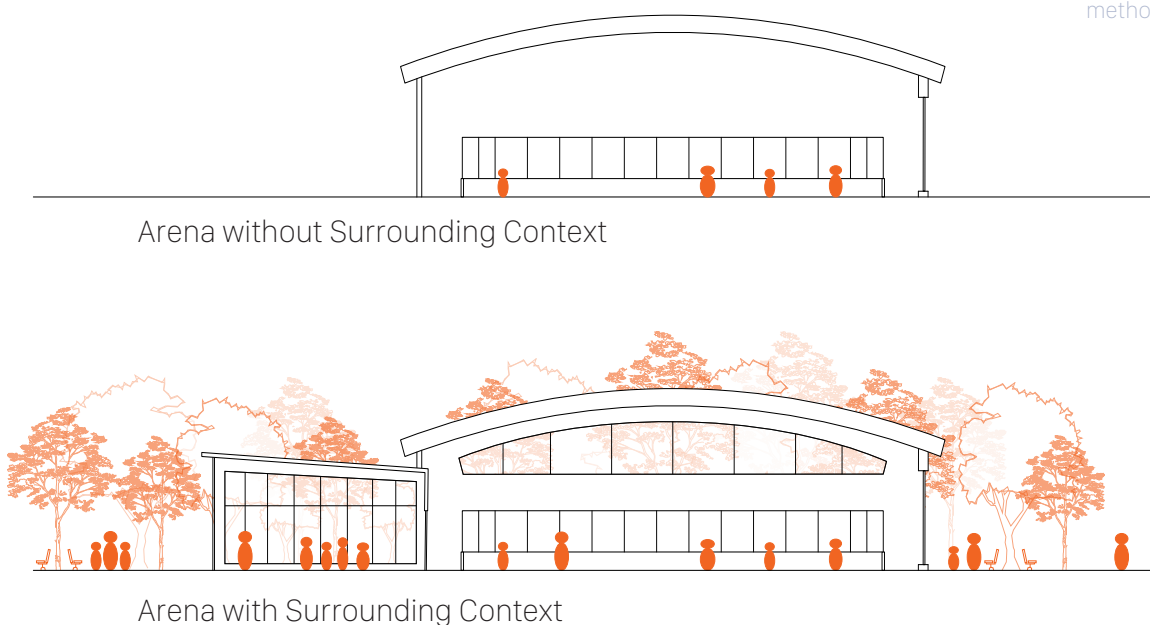
In Canada, there are around 2800 community rinks and arenas that host skating (see Figure 7).³ Almost 50% of these buildings were built before 1980 as post war memorial buildings to celebrate Canadian culture, and they were also built as the Canadian Centennial projects to celebrate Canada's 100 year anniversary.⁴ With ice rinks having an average lifespan of 30 years, this puts around 1800 rinks and arenas past, or entering their final lifespan.⁵ A solution to the issue of these older buildings that are slowly being neglected is to create an adaptable program that speaks to the current community's current needs, while keeping the spirit and tradition of skating in Canada through an adaptive re-use intervention (see Figure 8). The program also needs to be versatile and adaptable to give the building opportunity to grow for future programmatic needs of the community.

Fig. 8
Thesis issue.



The unity of community through sport demands more than a field of play but rather a space for the game through an engaging and exciting atmosphere. “People want to live in communities, not cities. They want to connect with other people. As density increases, the walkable neighbourhoods that incorporate outdoor spaces — think farmer’s markets, parks, skating rinks, and sports fields — become highly sought after.”⁶ Gonçalo Pedro is speaking to the importance skating rinks have on urban communities, and when successful, create a greater bond within a city’s culturally diverse community by physically bringing people together in a space in which they can cheer and socialize collectively. The connection between entity and activity is made through the physical space where the game is played, which also creates a relationship between the player and viewer. That is why adding a program that is embedded in an urban community is vital for social growth of its users (see Figure 9). The dynamic interaction between viewers and players is critical for the success of the arena as there is a cycle from fans cheering for the game, and players using the crowd energy that makes for a more competitive game and a greater social interaction within and around the building, at the community scale.

Fig. 9`
Community centre integration
methodology.



The Exhibition Park Arena is a building located in a historic park, located just outside the downtown core of Guelph, Ontario (see Figure 10). It is an example of an older, inefficient public skating rink that can adapt and contribute to the current surrounding urban context, growing the local sense of community. Right now, it sits dormant within the park, waiting for winter and the skating season to start, as its only current purpose is winter skating, and summer hockey. The current spacial program the rink offers doesn't foster the ability for public interaction, and lacks the required programmatic elements that the community desires from the park master plan. The commercial form and materiality neglects the surrounding neighbourhood, reducing the park's goal of becoming a stopping point for social activity. There is also a lack of seating and social grounds within the building, forcing users to separate from the events being held on the ice. There is a lot of potential to create an adaptive, publicly led program that helps nurture a connection from the users, to viewers, to the community, both inside the centre, and outside through its connection to the surrounding park space. There is also opportunity to create community growth from the adaptive reuse of this old community rink by introducing a range of programs that speak to the seasonality of the park that it sits in, instead of the single season events that it currently manages. There are plenty of events and activities within Exhibition Park throughout all seasons that the rink doesn't speak to. An introduction to summer interventions, including; community classrooms, community workshops, youth centers, and other sporting centers, will allow more users to engage in the building. This will ultimately create a stronger connection within the community, as there will be a designated social space that is adaptable for multiple events and occasions that are related to the park's typical usage. Adaptable spaces allow a larger variety of activities which is a theme of the neighbourhood group, hosting a wide range of events throughout the year.

Guelph has worked towards developing park systems throughout the city limits to help maintain the natural environment. According to their city website, "Guelph has over 1000 hectares of parks and open space where you can find over 70 km of trails and paths."⁷ These trails that sprawl throughout neighbourhoods create an urban network that is connected to different public amenities (see Figure 11). There is potential for the centre to interact with the local context, and instead of sitting dead on site, create an integrated social space that allows users to effectively celebrate the surrounding social vitality and Canada's skating traditions. The rink requires integrated social spaces, along with inclusive viewing stands that allow a greater connection to the games being played on the ice. The Exhibition Park Arena was initially a designated practice facility that now also hosts numerous local games and tournaments. The current state of the arena isn't fit to host these events in a successful manner that brings the community together, and grows local passion for sport and socialization.

Fig. 10
Existing arena at Exhibition Park.



Fig. 11
Existing pedestrian and cycling trails
in Guelph, ON.

● ● ● Inner city pedestrian trails



Exhibition Park has a neighbourhood group that hosts social events all throughout the year to help engage all ages of the community. The community is a younger demographic, so more programs are directly to after school programs and events catered to students, which do not have an official place to practice. The adaptive re-use of the community rink is an opportunity to house the multiple events the community group holds each year to create a place for the neighbourhood to celebrate their social practices within the park.

Outside the traditional skating program within the project, additional spaces including; summer sports courts, classrooms, workshop spaces, student and youth social spaces, and exercise space can help strengthen the community social fabric. This combination of programs speaks to the current and future needs of the Exhibition park neighbourhood, and surrounding communities. These programs were selected based on a matrix of correlations not only to the park, but to a master collection of programs which are held in the park.

Contemporary skating arenas are part of a 'community center' which also hosts an assortment of other programs, speaking more to the annual community desires, rather than winter programs. There is an adaptability through the seasonality of the programs in this building type which allows it to host social connections with more success than a typical hockey rink. The adaptive re-use in this project looks to adapt the traditional rink typology, and transform it into a more community center basis through it's social capacity. The method behind creating a community centre that engages the local community, promotes social encounters, and houses the country's national sport can be done through an integrated program that allows users to use the building not only throughout the day, but throughout the year with an adaptive program.

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Part 1



Fig. 12 St. Andrews Presbyterian Church.

Guelph's Urban Identity

"The Royal City."

-John Galt

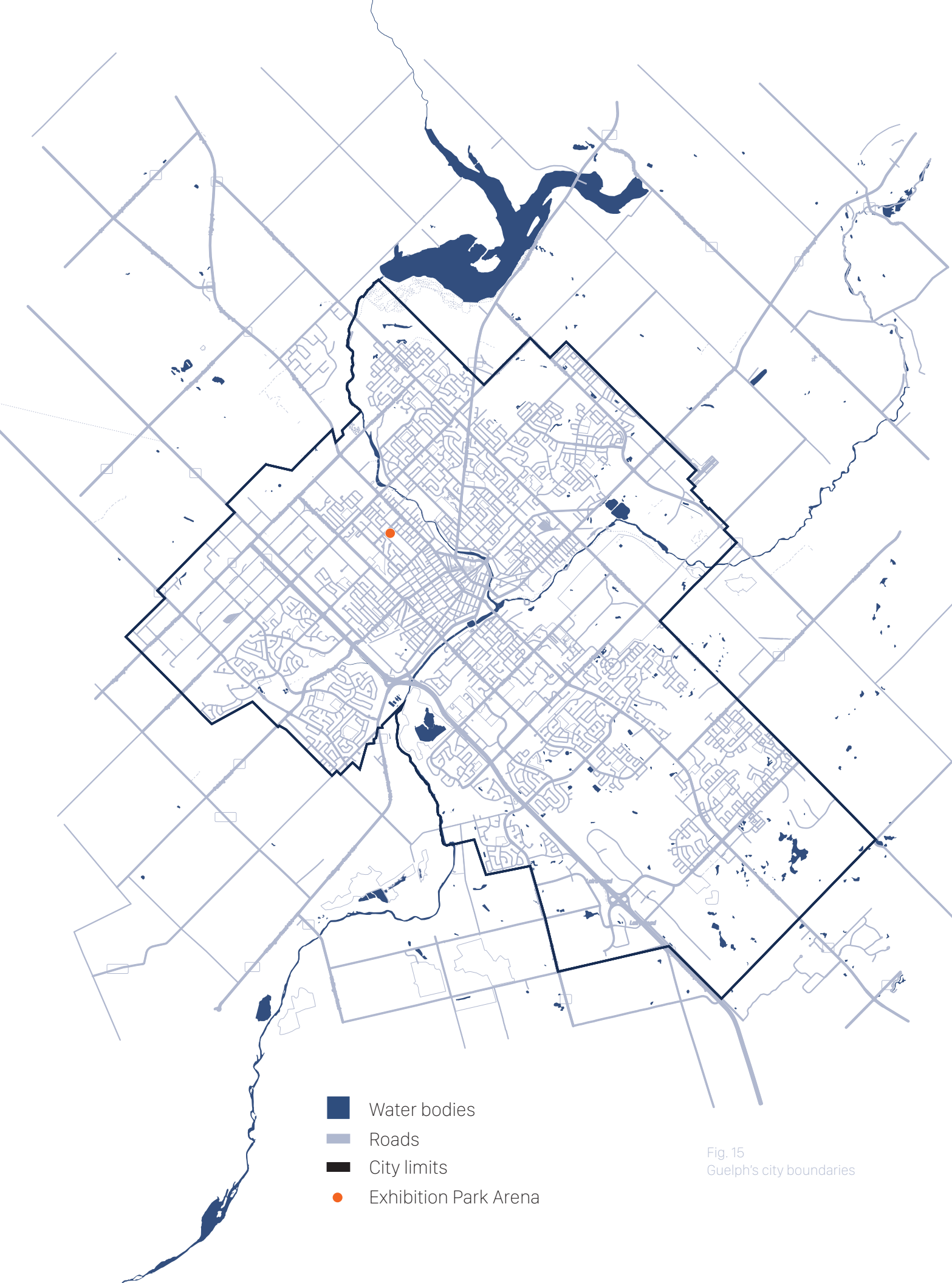
Guelph, is considered to be one of Ontario's earliest planned cities, attempting to create a dynamic road system around its historic downtown. The idea was to follow a European urban style that allows roads to flow along the natural features of the city's landscape. In the mid 1800's, Guelph popularity rose when the construction of a railway ran through what was just a small town, and with it, brought the quarry industry. This track was part of a system which ran from Toronto and the general Greater Toronto Area, to Detroit, United States, via Windsor. This is what helped the first population gain for Guelph as the industry brought workers and their families to the town, to stay.



Fig. 13
Guelph, Ontario and Exhibition Park
in the fall.



Fig. 14
Guelph, Ontario and Exhibition Park
in the spring.



- Water bodies
- Roads
- City limits
- Exhibition Park Arena

Fig. 15
Guelph's city boundaries

The downtown core of Guelph originally begins at the intersection of two rivers, the Speed river, and the Eramosa river, and primarily expands westward along the direction of the railway (see Figure 15). The early city design uses natural elements like the two rivers and the topography to conduct the roadways and urban grid. Since the urban plan was based on European style, the traditional North American grid pattern is not sampled, but instead, more winding roads along the natural topography is abundant in the downtown district.

There were three quarries at this time, and over the years reduced to just one current existing quarry. The quarries were located in close proximity to each other just south of the downtown core. With the size of the town, the quarries were considered the outskirts, but with the prompt growth of the town, housing districts enclosed the quarry locations. The Guelph Dolime Quarry is the current standing quarry in Guelph, which sits on Guelph's border. Though, with the current rate of growth of the city being one of the fastest in Canada, it will also soon be encapsulated by Guelph's urban fabric. Guelph's national identity stems from the fact that people came for the provided industry, and stayed for the landscape and beauty.

With limestone being a byproduct of the quarry industry, the town developed an urban fabric of limestone brick structures in the downtown District . This is what ultimately creates Guelph's building typology now as buildings and historic ruins in the downtown and surrounding areas that are still standing, have the limestone materiality to speak to the city's history.



- Rail Ways
- Roads
- City limits
- Historic Quarry Locations

Fig. 16 Railways of Guelph

As the quarry industry grew in Guelph, the railway system also expanded throughout the city to connect the quarries to surrounding departments (See Figure 17). The railway also stretched westbound as part of the 'Goderich Subdivision' now known as 'The Guelph Junction Railway' which is now operated by the 'Goderich-Exeter Railway.' As Guelph's population and development expanded, and the quarry industry started to descend, the railway was removed from the westbound extension and turned into pedestrian walking and biking trails (see Figure 16). The CNR Spurline Trail and the Royal Recreation Trail both run through the pedestrian trail system next to Exhibition Park, located near the current downtown core. The trail wraps around the downtown district as a circular loop around the downtown, and also reaches out at three locations of the trail ring which stretches out to the outer perimeter of the city towards the border. The three pedestrian sections provide a safe and accessible passageway for users to reach the downtown area from the outskirts. It also creates a pedestrian link to Guelph Lake Conservation Area for users to gain access to the park which does not require a car or bus. Again, the inner city link runs through Exhibition Park which is the location of the adaptive reuse project.

Fig. 17
Guelph's historic quarry locations.

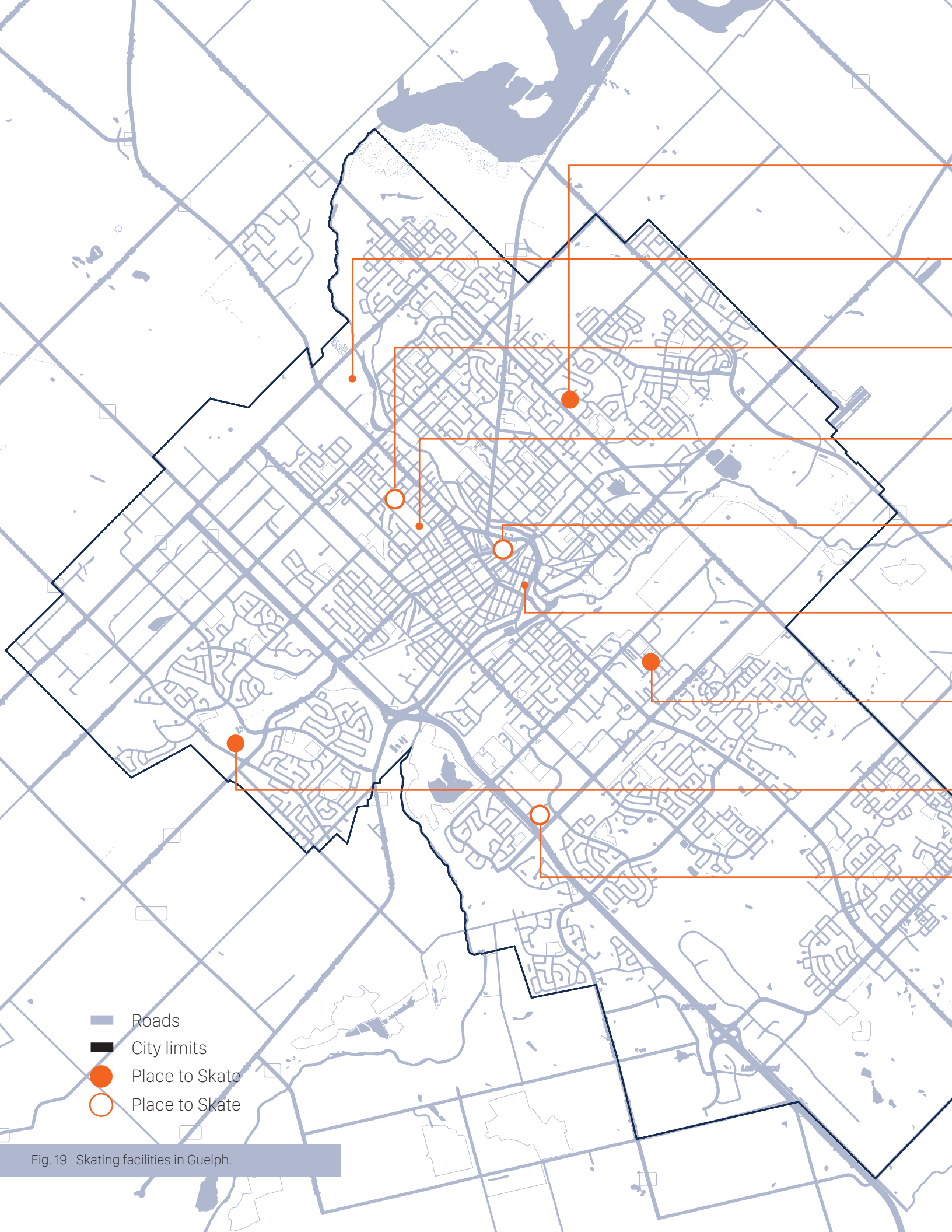




Fig. 18 Skating rink outside at Market Square.

Guelph's Existing Rinks

In Guelph, there are six existing places to skate, and multiple public skating paths, which are scattered around the city. They have been categorized into three typologies including; centers with seating, centers without seating, and seasonal outdoor skating paths. These three categories encompass three building typologies which host winter activities and sports in Canada.



- Roads
- City limits
- Place to Skate
- Place to Skate

Fig. 19 Skating facilities in Guelph.



Victoria Road Recreation Centre



Riverside Park Skating Loop



Exhibition Park Arena



Exhibition Park Skating Pad



The Sleeman Centre



Market Square Skating Pad



Gryphon Centre



West End Community Centre



Centennial Arena

 —  — Community/Recreation Centres

 —  — Skating Rinks

 —  — Seasonal Skating Paths



Fig. 20
Victoria Road Recreation Centre in
Guelph.



Fig. 21
The Sleeman Centre in Guelph.



Fig. 22
Gryphon Centre Arena in Guelph.

Victoria Road Recreation Centre is Guelph's largest public community centre which also hosts skating (see Figure 20). Apart from skating and hockey, there are other public programs that community members can take advantage of including; daycares, swimming, a fitness centre, and youth clubs. The building is used primarily as a community space and secondarily for skating during the winter months. The largest facility in the building is the ice rink, making it Guelph's most used arena for tournaments and larger sporting events. The other rinks are used for tournament overflow and overlap. During the summer, there are also camps held at this community centre since there are general use spaces for non programmed activities. The adaptable space allows a larger frame of programs to use the centre during the off season of skating. During the summer, the ice is removed and the rink is used for local ball hockey leagues. Most local rinks are also like this, but with the addition of the other summer programs, the centre is able to use this space for camps and physical activity that is not hockey related. The Victoria Road Recreation Centre is in the class of community centers, as opposed to rinks or arenas.

The largest of the arenas is the Sleeman Centre (see Figure 21). This arena is where the Guelph Storm Junior hockey team plays, located within a mall in the downtown area. This arena is primarily used for sporting events and larger social venues as it has the largest seating capacity of the arenas in Guelph at 5,100.⁸ The arena also hosts public skates and social skating events, though they are not as popular since the arena is used in a professional manner for the local pro team. The Sleeman Centre, named after the Sleeman brewery sponsorship speaks to the historical presents of George Sleeman, who was the mayor of Guelph in the late 1800's.⁹ Sleeman brewery is another example of a company moving to Guelph from their access to the train track that was built, taking advantage of a major rail line opportunity in the district.

The Gryphon Centre is the final arena in Guelph that has been designated as an arena which has seating around the rink surface for users to watch the events on the ice. This arena is the primary facility for the University of Guelph Gryphons hockey teams (see Figure 22). This building hosts tournaments and other skating activities, but not as many public events. Since the building's primary use is hockey and skating, it is put in the arena class.

The other three locations are community rinks, each with little to no seating options. This is why they are classified as rinks. Since they're community rinks their primary purpose is to provide a spot for skating and nothing more. The three locations are the Centennial Arena, West End Community Centre, and Exhibition Park Arena. The location of this project is at the Exhibition Park Arena, located just outside of the downtown core.

Fig. 23
Market Square skating pad in
downtown Guelph.



There are several seasonal skating paths and outdoor rinks located throughout the city, including a place to skate at most of the local parks and green spaces. There are multiple skating paths close to the downtown core which are designated for skating and not hockey, including ice paths that weave in and around trees and the natural environment like at Riverside Park (see Figure 24). There are quite a few located within the downtown area which brings back to the importance of skating and that are in the downtown core, as the Guelph population is more inclined to skate in there. An example of this is the Market Square skating pad in front of City Hall (see Figure 23).

Fig. 24
Riverside Park winter skating path.

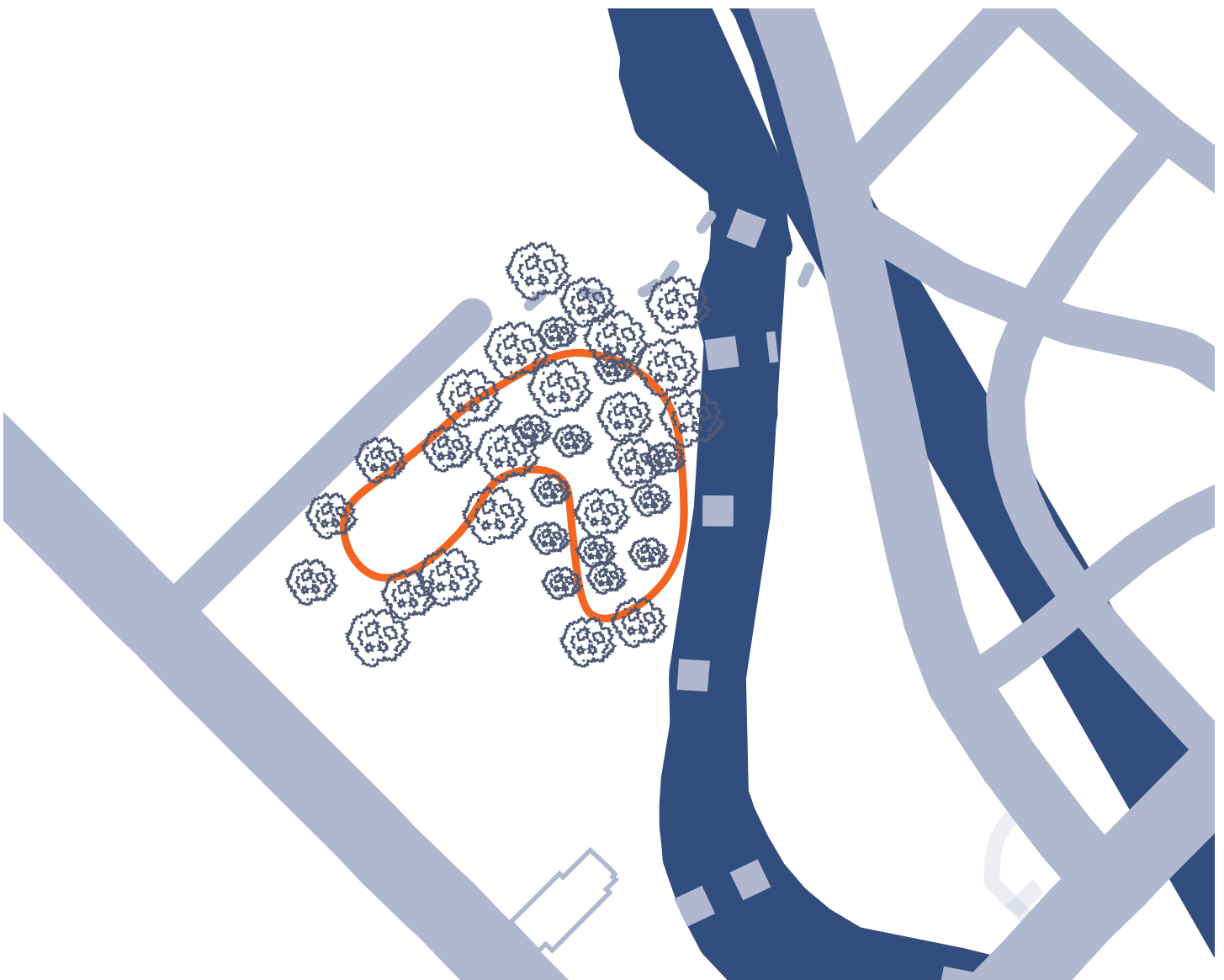


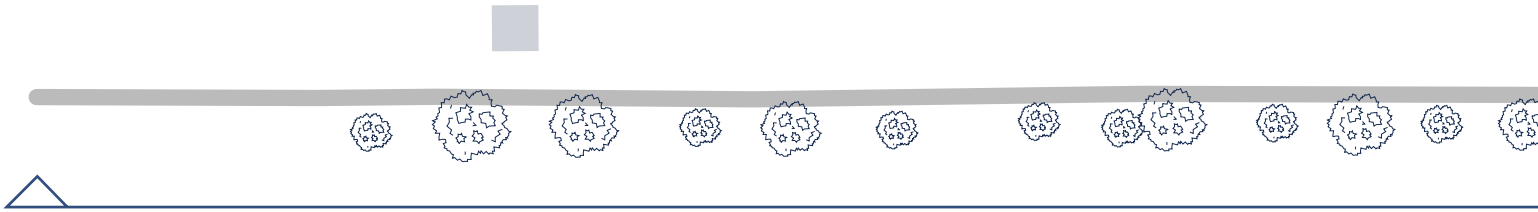


Fig. 25 Seasonal fair event in Exhibition Park.

A Brief History: Exhibition Park 1827-2022

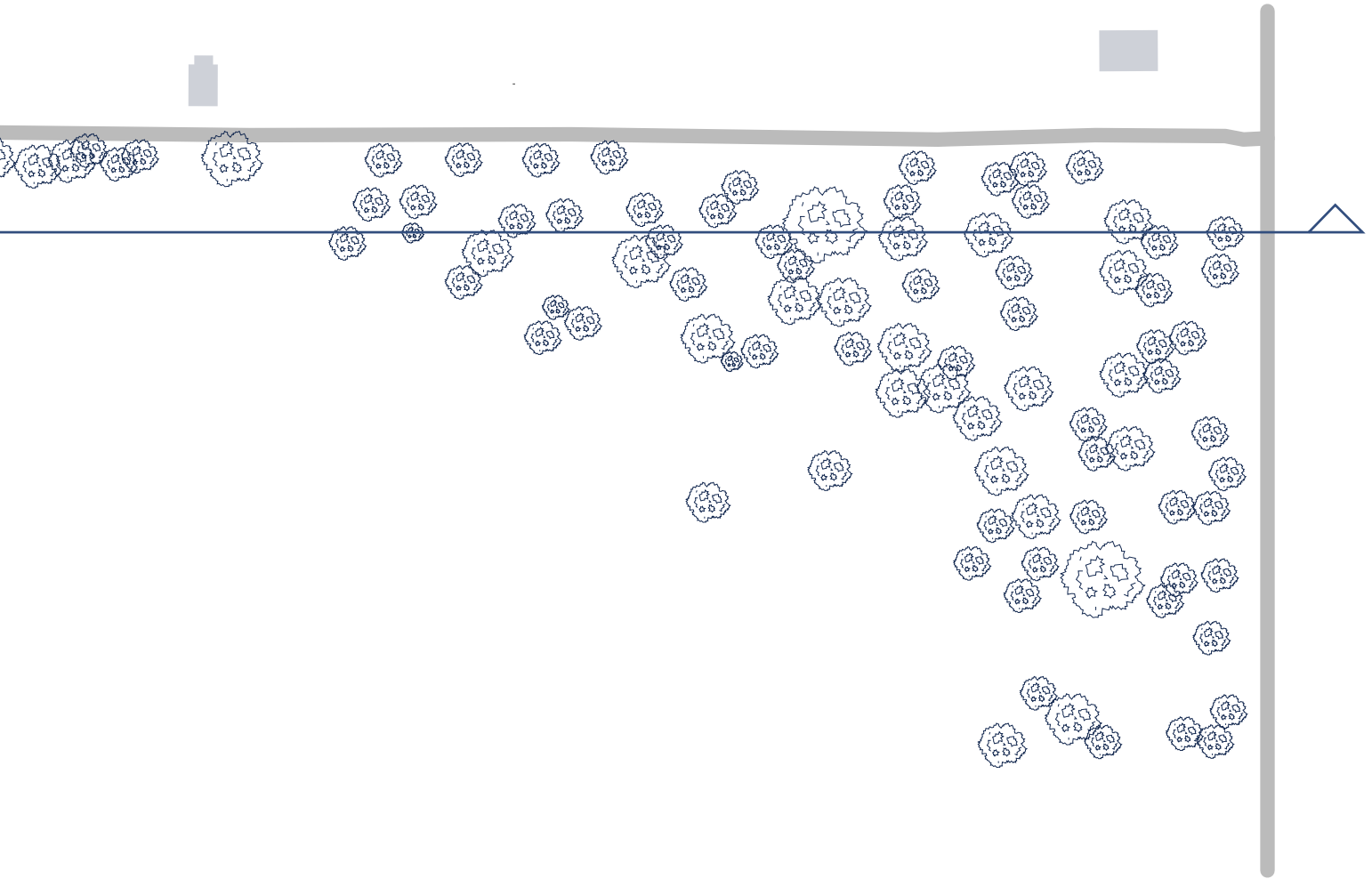
To help understand Guelph and Exhibition Park, a study of different time periods was done in a comparison of what was happening in Guelph at the time, and how Exhibition Park in relation to the social events at each time period. To summarize, people came to Guelph for the industry, but stayed for the place. It is a theme that is seen throughout each period, which describes its fast growth, being one of the fastest growing cities in Canada by population.¹⁰

The history of the site will also describe how the site has been adapted over the years to meet the needs of the surrounding community, and how the city has created a versatile public space in Guelph's oldest park.



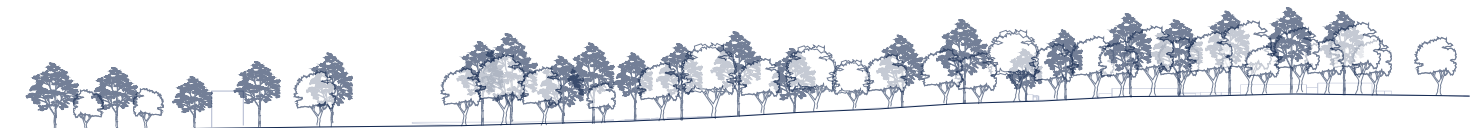
Guelph was just a small town founded in 1827 by a British development firm called the “Canada Company.”¹¹ As part of the a tradition of the company, a ceremonial felling of a maple tree to signify the beginning of the township. At this time, the primary industry supplying jobs to the town occupants were the nine breweries for the 700 person population.¹² One of the earliest breweries in Guelph was the James Hodgert’s brewery, managed by John Sleeman, who later created his own brewery, which still is today known as the Sleeman Brewery and is now the largest brewery in the city. Before the rail line, the industrial context of Guelph was minor, but on the verge of developing the town's identity.

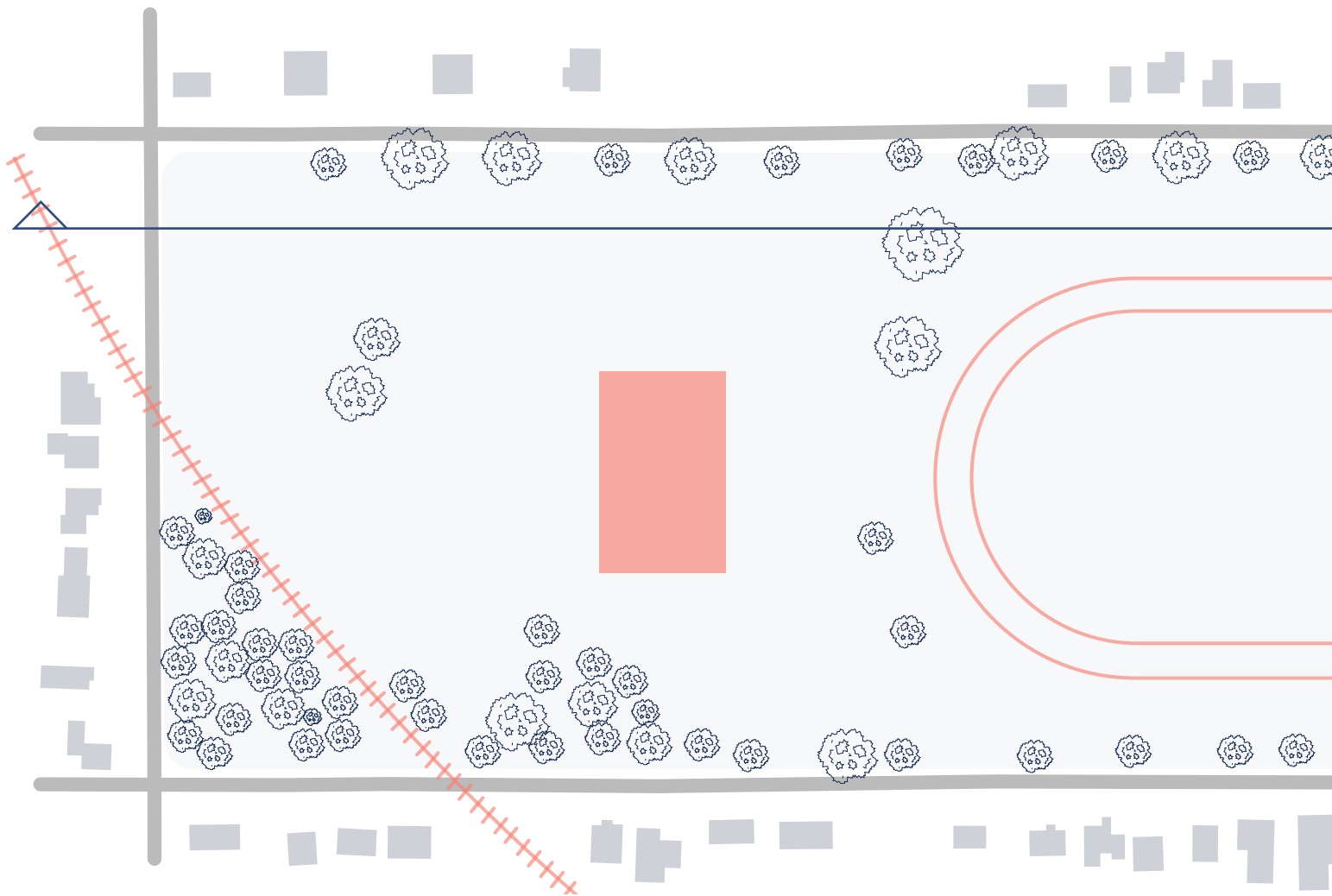




The location where Exhibition Park is currently located was used as farmland in the mid 1800's. The lot was an open field for crops with a small forest on the south side of the park, which is present to this day.¹³ There was a single road on the north-east face of the park which was one of the original access roads to the surrounding Wellington county district destinations (see Figure 26).

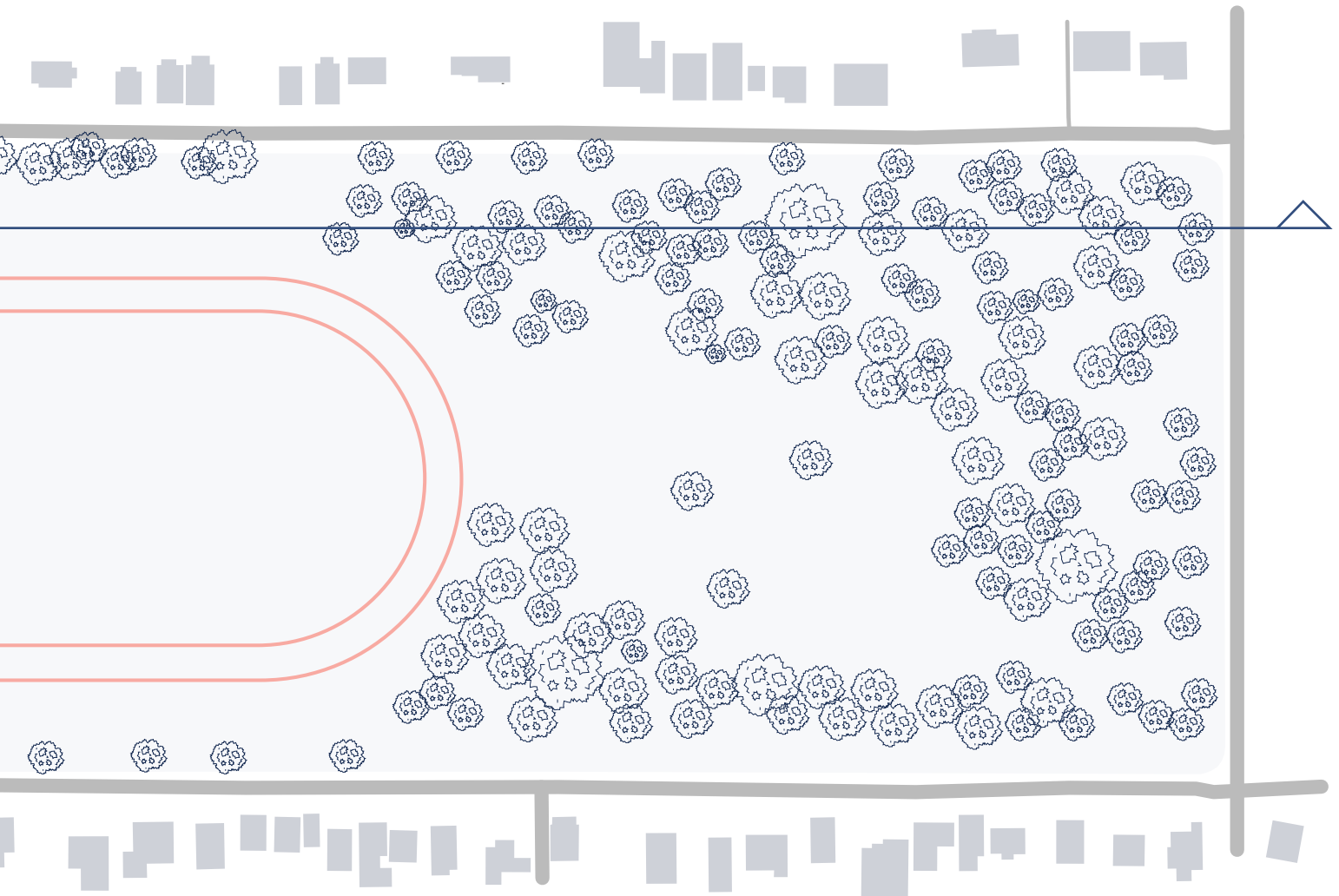
Fig. 26
Exhibition Park during the mid
1800's.





With the introduction of Guelph's first rail lines in the late 1800's, early 1900's, the population grew since the potential for industrial endeavors rose. With the construction of the rail line that ran through the downtown core, there was a demand for social infrastructure for the community to engage in social venues.

Going into the late years of the century, the site of Exhibition Park was bought by the township of Guelph from the Catholic church to be used as the annual fair grounds the city implemented in 1871 for the purpose of supporting the local necessity for social based activities (see Figure 27).¹⁴ This was the first attempt to create a social event that reinforced community collaboration. This fair brought with it a horse track

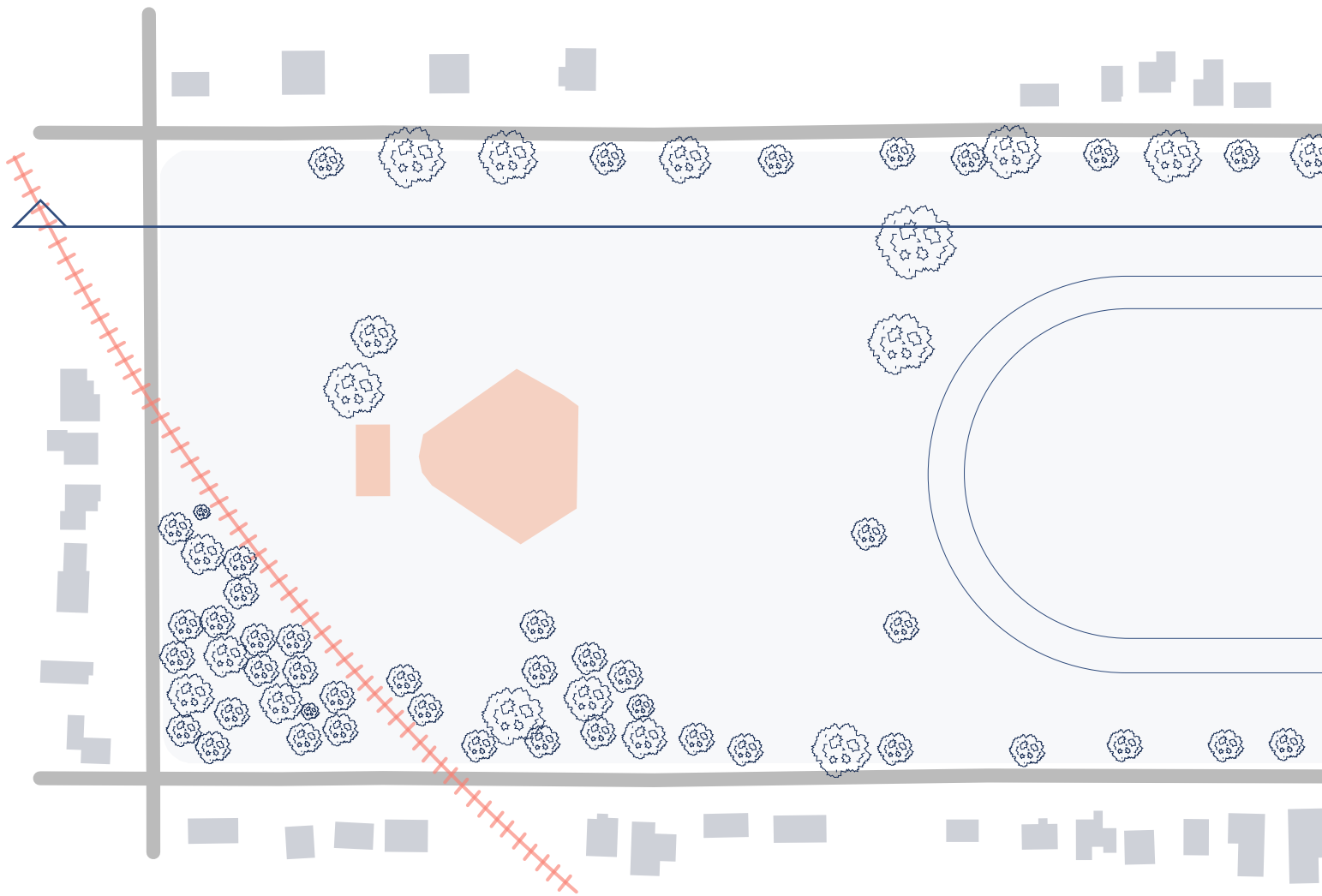


and viewing booths, which were located in the centre of the park. People could stand around the track during the exhibition and watch from the perimeter of the raceway. This helped pave the way for Guelph's reputation and influence in the agriculture industry as well.¹⁵ "The decision to locate the Ontario Agricultural College in Guelph in 1874 also played a significant role in cementing the city's reputation as an agricultural leader."¹⁶

The people came for the industry, and stayed for the city.

Fig. 27
Exhibition Park during the late 1800's.

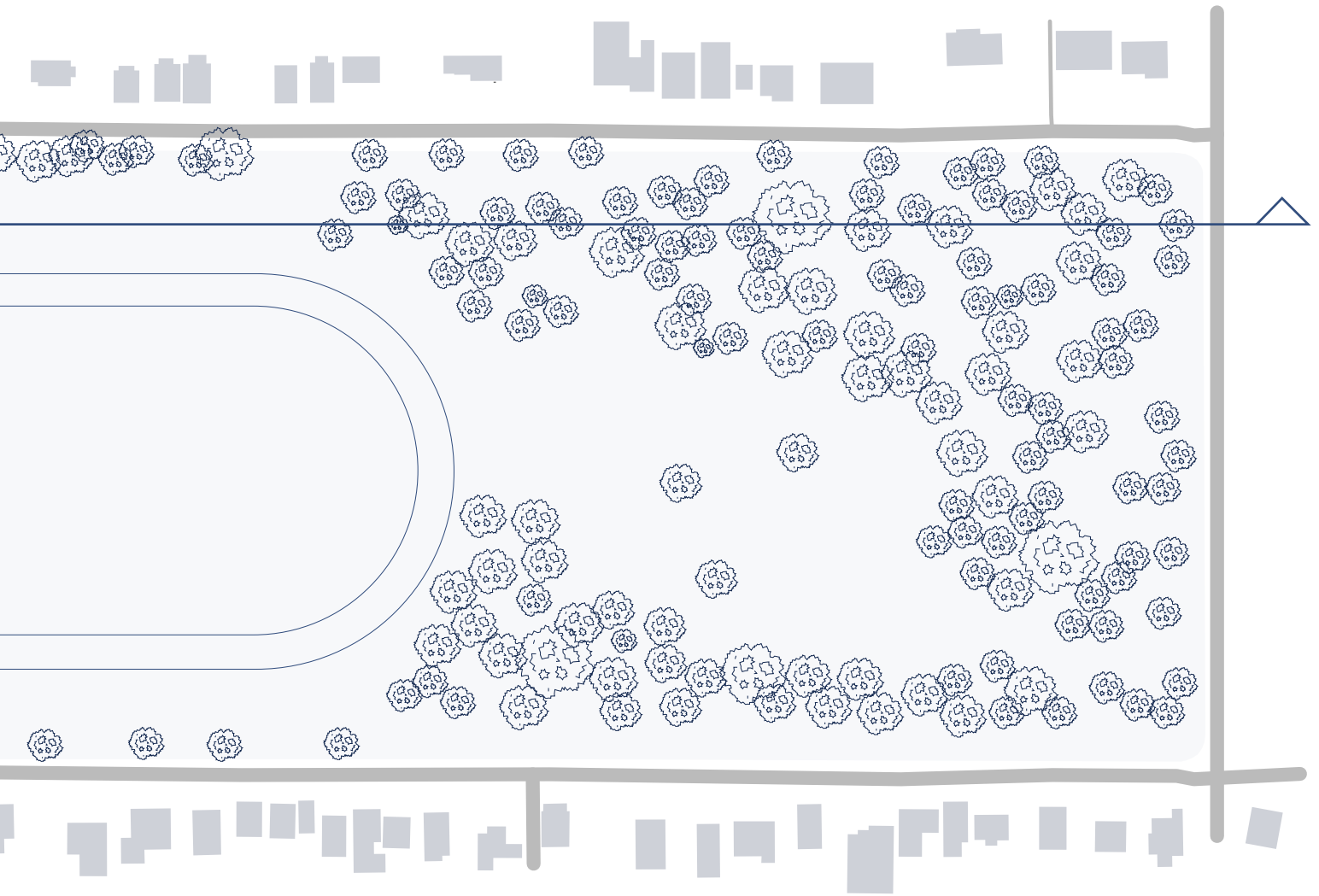




With the expansion of the railway system and quarry industry, the construction of the Guelph Junction Railway ran through the north-western corner of the park to create a rail link towards external existing quarries, which then connected to Toronto and Detroit as two major city connections.

In 1935, there was also a permanent baseball diamond created in order to build Exhibition Park as a stopping place for the community instead of just an open field. This was implemented for the direct community to have a sporting venue for the park as a means of activity for when the exhibition was not running. With the Junior league baseball diamond built in the park, along with the viewing stands for the community, the park transformed into a destination space for the public, as a

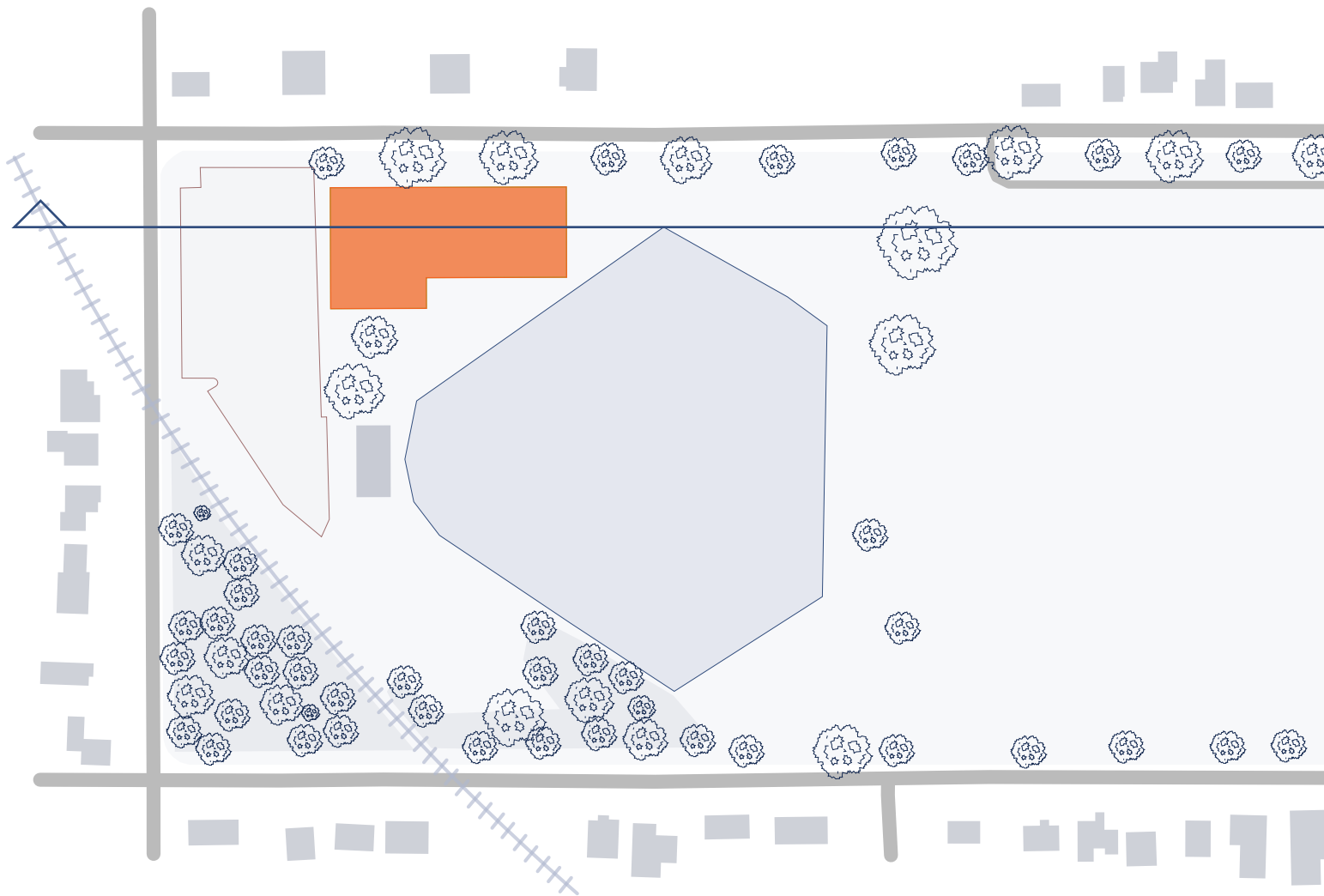




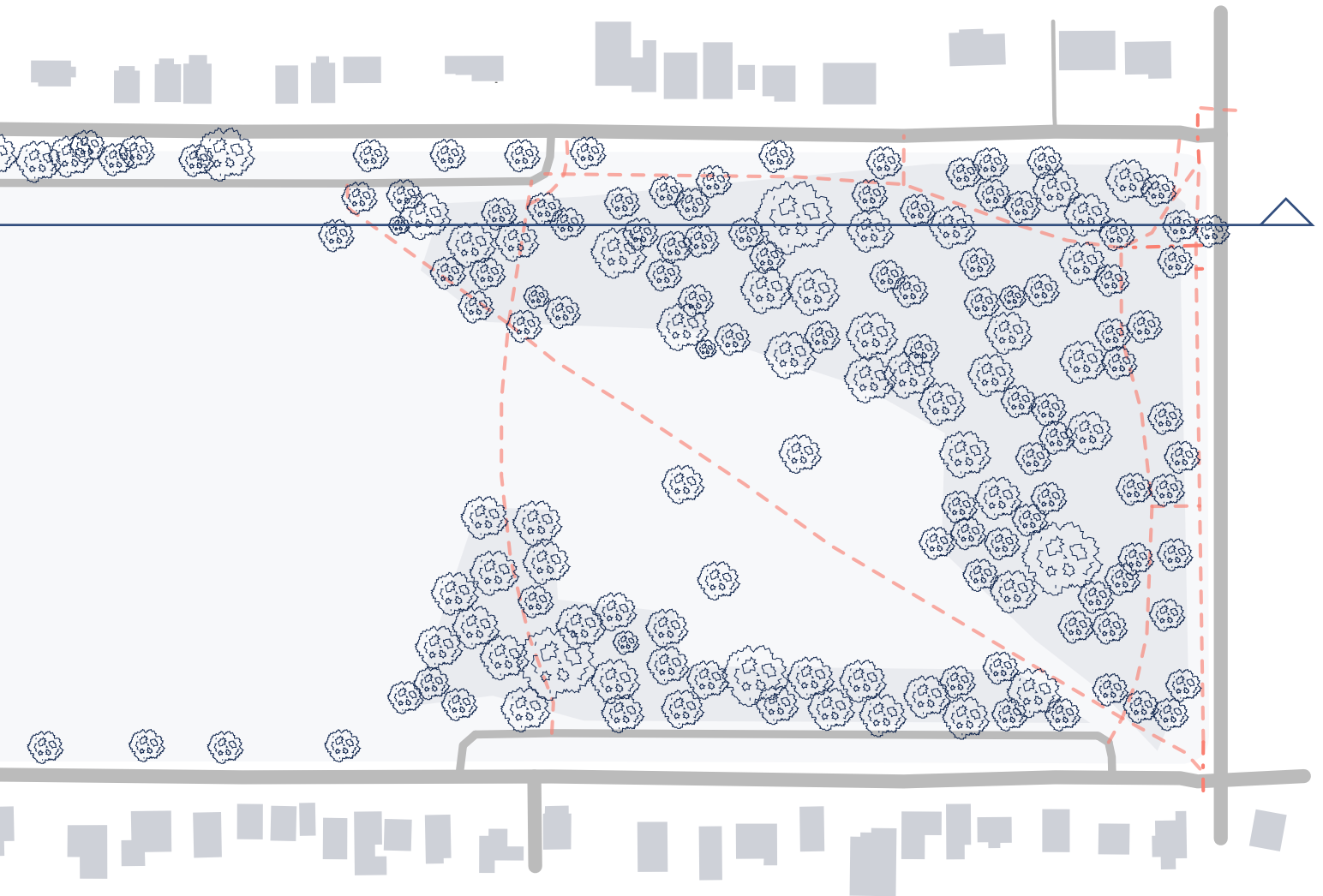
scheduled program adapted the park as a social event, similar to the horse racing track for the Exhibition Fair (see Figure 28).

Fig. 28
Exhibition Park 1945.





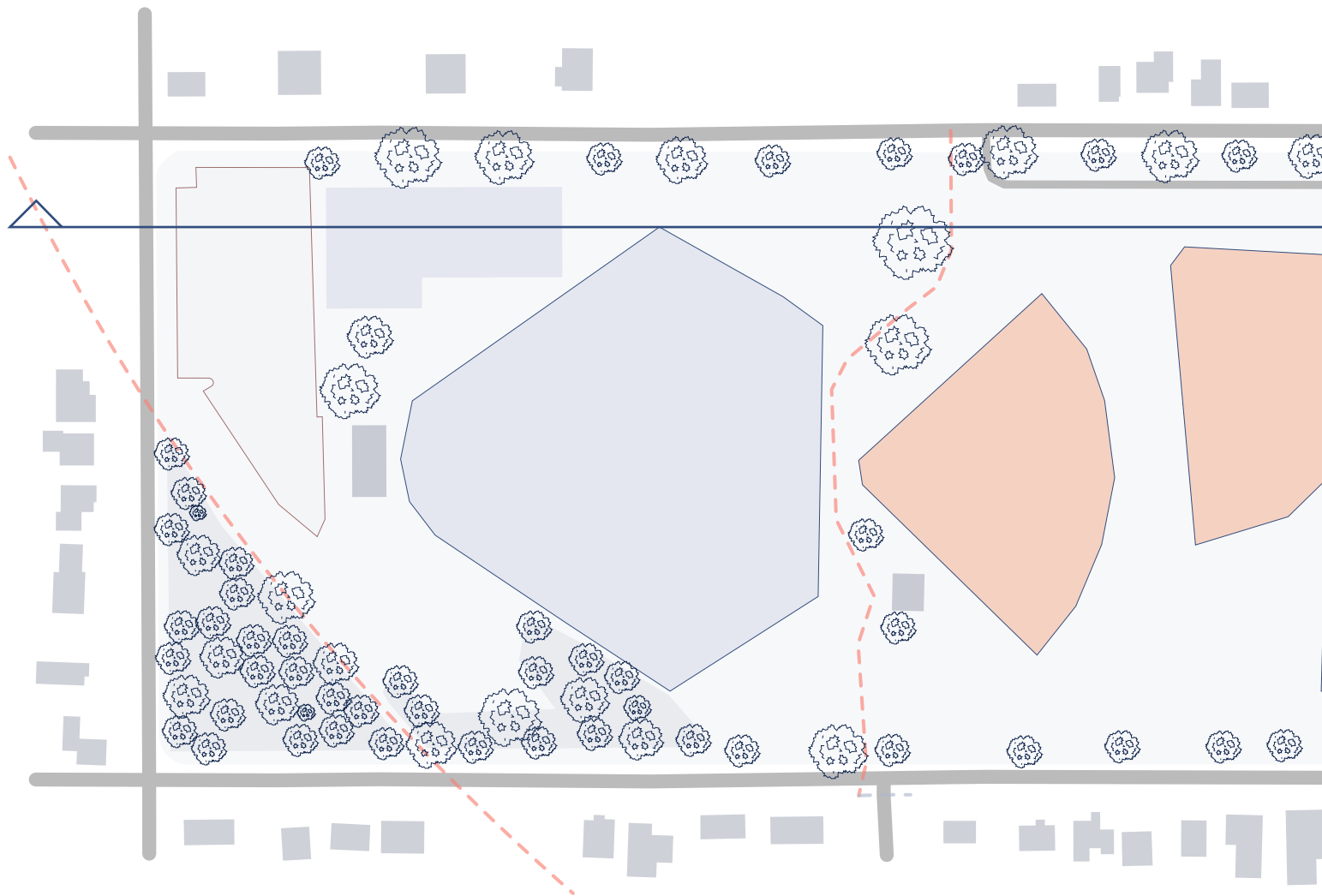
The current existing rink in Exhibition Park was built in 1965, it was built just before the Canadian centennial celebration, celebrating Canada's 100th anniversary (see figure 29).¹⁷ The rink was built as a place to skate during the winter for the local community, which eventually extended to have an outdoor rink within the park as another skating domain. It expanded into a place of overflow for sporting tournaments and other skating winter activities when other arenas are full. With additional rinks and arenas being built throughout Guelph, Exhibition Park Arena became overlooked as a hosting location for winter sporting events of this scale. The building also holds the change rooms for the baseball field, David E. Hastings Stadium, attached to the adjacent side of the arena.



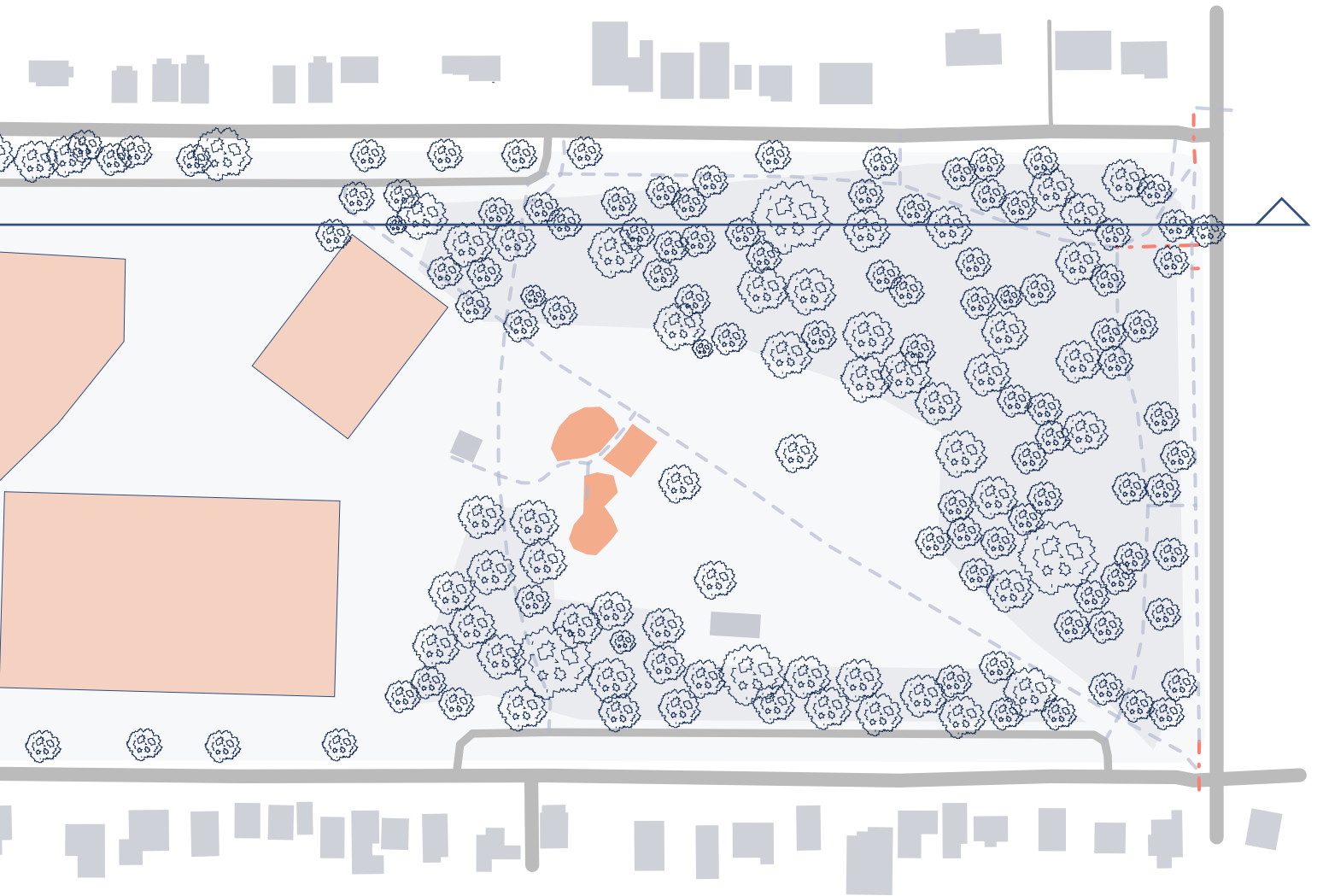
During this time, the development of the pedestrian created pathways began to shape the south end of the park which naturally began to proceed as users would use that space as an accessible shortcut throughout the community. These pathways weave around the trees and follows the elevated topography to create connections to multiple access roads to the park. This end of the park was more popular as it is closer to the downtown district of Guelph, a roughly 15 minute walk.

Fig. 29
Exhibition Park 1965.





The Goderich to Guelph rail line was converted to an entirely pedestrian inner city trail, as the railway was no longer in use. The removal of the tracks was restored by volunteers from the local communities (see Figure 30).¹⁸ This path is now used as a walking and cycling connection surrounding the downtown core of Guelph, and now extends out over 120km.¹⁹ A report from CBC News, London mentions “the trail embraces the communities that it passes through, allowing cyclists to take their time and explore new corners of southwestern Ontario.”²⁰ This path has created a stronger network between Exhibition Park, and the surrounding parks and trail systems, opening the park up to more users, who can also stop and explore Exhibition Park. The city also introduced fountains and public washrooms in the park which promotes the trail use within the space. They also



allow the park to host larger gatherings and markets throughout the warmer months. During the winter, an outdoor rink is maintained by the city for the park's users where the community can play hockey and skate outdoors.

In addition to the existing baseball diamond, more diamonds, tennis courts, and a football field were built to create a social environment through sport within the park, geared towards making Exhibition Park a stopping place with activities and sporting equipment, as opposed to just a shortcut across the neighbourhood. Within the south end of the park, in the forested area, a playground was built to create a place for the younger demographic. The playground was placed where there is slower traffic, and is sheltered from the forested area. The

Fig. 30
Exhibition Park 2022.



playground is a timber theme, custom designed to match the aesthetic of the forest it was built in.²¹ The playground speaks to the site it sits in and directly responds to the park's natural features.

During the winter, the Exhibition Park Arena, which is the building behind this adaptive re-use project, is used for hockey tournaments, hockey practices, other skating events, but primarily hockey. Throughout the other seasons, the arena is used for indoor ball hockey, and to house the change rooms for the adjacent baseball diamond. The building no longer meets the needs of the surrounding community, and takes away from the park's overall goal to create an adaptable space for its users.



Fig. 31 Surrounding community.

The Surrounding Community Fabric

"People want to live in communities, not cities."

-Gonçalo Pedro

Guelph, and specifically, the Exhibition Park neighborhood has a long history that dates back to when the park was just farmland. Houses were built independently around the exhibition park block throughout the existence of Guelph. In the mid 1800's, there were only a few houses along the block of the park as London Ave, the road on the south side of the park, was considered as the town limit, placing the park just outside the town's border.²² Since the park was then farm land, the few houses along the perimeter were farmhouses to tend to the land. As the park grew more popular, the houses that were constructed on London Rd, Kathleen St, Exhibition St, and Division St, all managed to match the historic fabric of the neighbourhood through the wood and brick materiality, and the upkeep of green yards and boulevards. The materiality of the



Fig. 32
Housing surrounding Exhibition Park
on Kathleen Street 1.



Fig. 33
Housing surrounding Exhibition Park
on Kathleen Street 2.



Fig. 34
Housing surrounding Exhibition Park
on Kathleen Street 3.

neighborhood being a mix of brick and wood comes from the quarry history, and the connection to the mature forest. There is a stronger sense of community, and connection with the park from the surrounding neighbourhood due to the scale of the houses surrounding the park, where only a small number of buildings peak above the tree line. This building typology helps create a view-port to the park. There are no two houses that look alike, having a mix of small and medium century homes, including a property that farms chickens and a large front yard garden.²³

The park has a reputation for being a very green and desirable place to live with the context of the green scape within the forest, and the historic building typology surrounding the park.²⁴ The city of Guelph over the years has prioritized the preservation of the park and green space by adding trees, and introducing limited interventions to keep the fields open and versatile. Residents of the exhibition park neighbourhood would say that the park itself is like one large backyard. Ed Butt of the local news outlet 'Guelph Today' says, "writing from experience, and looking back to the early 1960's, I can say that living in a house that overlooked Exhibition Park was like having the world's biggest and best backyard, except it was across the street."²⁵ With the average age of the area being 38.4, the families tend to maintain their properties, with the understanding of the neighbourhoods historical significance.²⁶

"Why is Exhibition Park there at all? Unlike Riverside and Royal City Parks, it has no natural geographic focal point, The speed River isn't even in sight."²⁷ The programmatic implementations of the fair, and the other small venues at the time brought together by the city, in demand of the people, created a successful social space that bound the neighbourhood's cultural standpoints. Especially with the 'Exhibition Park Neighbourhood Group' organization, there are plenty of events and programs within the park that solidify the bond of the neighbourhood, and promote celebration of national events throughout the year.

8. "Guelph Storm Seating Charts." n.d. Sleeman Centre. Accessed December 21, 2022. <http://thesleemancentre.com/seating-charts/>.

9. "About Us." n.d. Sleeman. <https://www.sleemanbreweries.ca/about>.

10. Flanagan, Ryan. 2018. "Guelph, Waterloo Region among Canada's Fastest-Growing Areas." CTV News. February 14, 2018. <https://kitchener.ctvnews.ca/guelph/guelph-waterloo-region-among-canada-s-fastest-growing-areas-1.3803380>.

11. "About Guelph." n.d. City of Guelph. <https://guelph.ca/living/about-guelph/#:~:text=On%20St..>

12. Stead, Hilary. 2002. "Guelph: A Peoples Heritage 1827-2002." Guelph: Barrow Communications. <https://guelph.ca/wp-content/uploads/Guelph-A PeoplesHeritage.pdf>.

13. "About Guelph." n.d. City of Guelph. <https://guelph.ca/living/about-guelph/#:~:text=On%20St..>

14. "Butts, Ed. 2017. "Guelph's Exhibition Park Was Once a Tract of Land Known as the Catholic Glebe." GuelphMercuryTribune.com. July 8, 2017. <https://www.guelphmercury.com/opinion-story/7413472-guelph-s-exhibition-park-was-once-a-tract-of-land-known-as-the-catholic-glebe/>.

15. "The Provincial Winter Fair — Guelph Heritage." n.d. www.guelphheritage.ca. Accessed January 20, 2023. <https://www.guelphheritage.ca/stories/the-provincial-winter-fair>.

16. Ibid

17. Renney, Tom. n.d. "Hockey Arenas and Facilities in Canada." [Www.hockeycanada.ca](http://www.hockeycanada.ca). <https://www.hockeycanada.ca/en-ca/corporate/facilities>.

18. "Restored Goderich to Guelph Rail Trail Offers Way to Cycle the Countryside." 2020. CBC News, London. August 16, 2020. <https://www.cbc.ca/news/canada/london/restored-goderich-to-guelph-rail-trail-offers-way-to-cycle-the-countryside-1.5686918>.

19. Ibid

20. Ibid

21. "Exhibition Park Playground, Guelph | Earthscape." 2015. Earthscape Play. 2015. <https://www.earthscapeplay.com/project/exhibition-park-playground-guelph/>.

22. Holman, Anne. 2018. "Guelph's Historical Maps and Their Present Usage for Heritage and Cultural Resources Using GIS Technology." Guelph Historical Society. <https://www.guelphhistoricalsociety.ca/downloads/may-2018-newsletter.pdf>.

23. O'Flanagan, Rob. 2017. "In Your Neighbourhood: Exhibition Park (34 Photos)." GuelphToday.com. May 7, 2017. <https://www.guelphtoday.com/local-news/in-your-neighbourhood-exhibition-park-34-photos-605083>.

24. Ibid

25. Butts, Ed. 2017. "Guelph's Exhibition Park Was Once a Tract of Land Known as the Catholic Glebe." GuelphMercuryTribune.com. July 8, 2017. <https://www.guelphmercury.com/opinion-story/7413472-guelph-s-exhibition-park-was-once-a-tract-of-land-known-as-the-catholic-glebe/>.

26. "Guelph, on - Demographics." n.d. Townfolio. <https://townfolio.co/on/guelph/demographics>.

27. Butts, Ed. 2017. "Guelph's Exhibition Park Was Once a Tract of Land Known as the Catholic Glebe." GuelphMercuryTribune.com. July 8, 2017. <https://www.guelphmercury.com/opinion-story/7413472-guelph-s-exhibition-park-was-once-a-tract-of-land-known-as-the-catholic-glebe/>.

Part 2



Fig. 35 Victoria Skating Rink.

The House of Skating

"The best thing about sports is the sense of community and shared emotion it can create."

-Bob Costas

Understanding the classifications of the different building types will help better understand the context which the existing building sites are in, and how the community uses these buildings to show their individual significance and ideologies. The rink, the arena, and the community centre are building typologies that build off each other through technical identities, representing how the surrounding culture utilizes the activities which were found within each building type. To help understand how the concept of this thesis can be applied to different rinks around Ontario, classification of each building type that the thesis applies to needs to be defined.



Fig. 36 Skating rink at Market Square, Guelph.

The 'Rink'

"Hockey rinks are a part of our Canadian landscape."

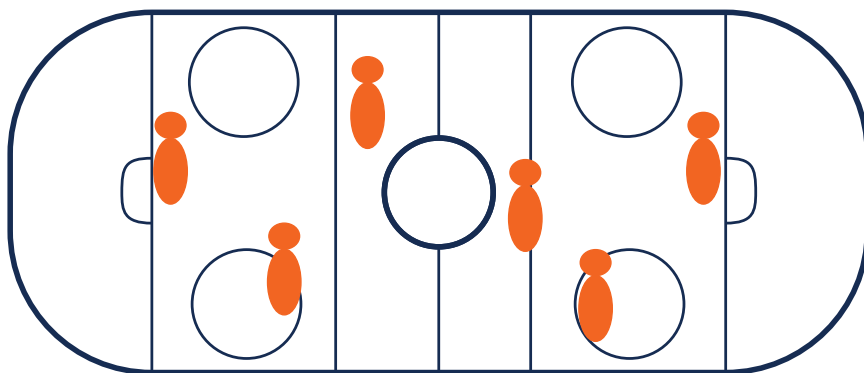
-Unknown Author

The 'rink' by definition is "a smooth extent of ice marked off for curling or ice hockey."²⁸ This term is in reference to where the sporting events are taking place, which is the ice itself (see figure 37). The rink is a direct reference to the part of the building where the ice is located, not necessarily the building as a whole. The focus of the rink as a typology is based around winter sports, since the primary use for the rink is skating, hockey, and curling. Enclosing an 'ice surface' area offered shelter for winterized activity as the building to control the internal climate, and allow a more efficient ice refrigeration system, and protect users from the external winter weather. It is not used for many social engagements during the offseason, except maybe ball hockey or lacrosse in the summer, depending on the facility and the community programs the hosting town or city offers.

The architecture around rinks and the game of hockey itself helped define each other by creating resolutions to problems each facet had. For example, since sideboards with glass panels for protection were not introduced around ice rinks until the early 1900's, there were no effective options to watch events happening that allowed the public.²⁹ Referencing the first game of hockey played at the Victoria Skating Rink and how the architecture of the building and the implementation of boards is emphasized by an advertisement that says, "Some fears have been expressed on the part of intending spectators that accidents were likely to occur through the ball flying about in too lively a manner, to the imminent danger of lookers on, but we understand that the game will be played with a flat circular piece of wood, thus preventing all danger of its leaving the surface of the ice."³⁰ There was also a physical restriction on how many people could really watch an event happening since viewers stood around the perimeter of the ice, hoping not to be blocked by the viewers in front. It wasn't until later when stands and elevated amphitheater seating were implemented around the ice surface, to create the typical arena we think today. As skating moved to indoor facilities from outdoor ponds and lakes,

Definition: rink
 "a smooth extent of ice marked off for curling or ice hockey"

Fig. 37
 Rink typology referring to what is happening on the ice.



it compacted the amount of players and users that can skate at a time, which started to form how games like hockey are played, assigning a max number of players on the ice at one time. Ice surfaces for hockey's purpose are 85 feet wide, which would be adopted by the 'National Hockey League' as a standard rink width (see figure 38).³¹ This ice surface width was taken into account by the structural system of the long spanning wood trusses above the ice, required to be column free.³² Finally, the ease of indoor lighting also allowed longer operating time for players leading into the evening, since the winter sun set earlier in the day, permitting the growth of skill in sports. All of these architectural interventions that were implemented to create a purpose-built indoor skating area grew the sport and formed the sports we watch today.

Before hockey moved to an indoor facility, and arena, games were played outdoors on the local rinks. Being outside allowed ice makers to create a larger and more open surface of play for users to come around and watch. Even to the extent of the 1924 Winter Olympics held in France, games were outdoors on the rink and spectators stood around the perimeter or sat

Fig. 38
Dimensions of a standard National
Hockey League rink.

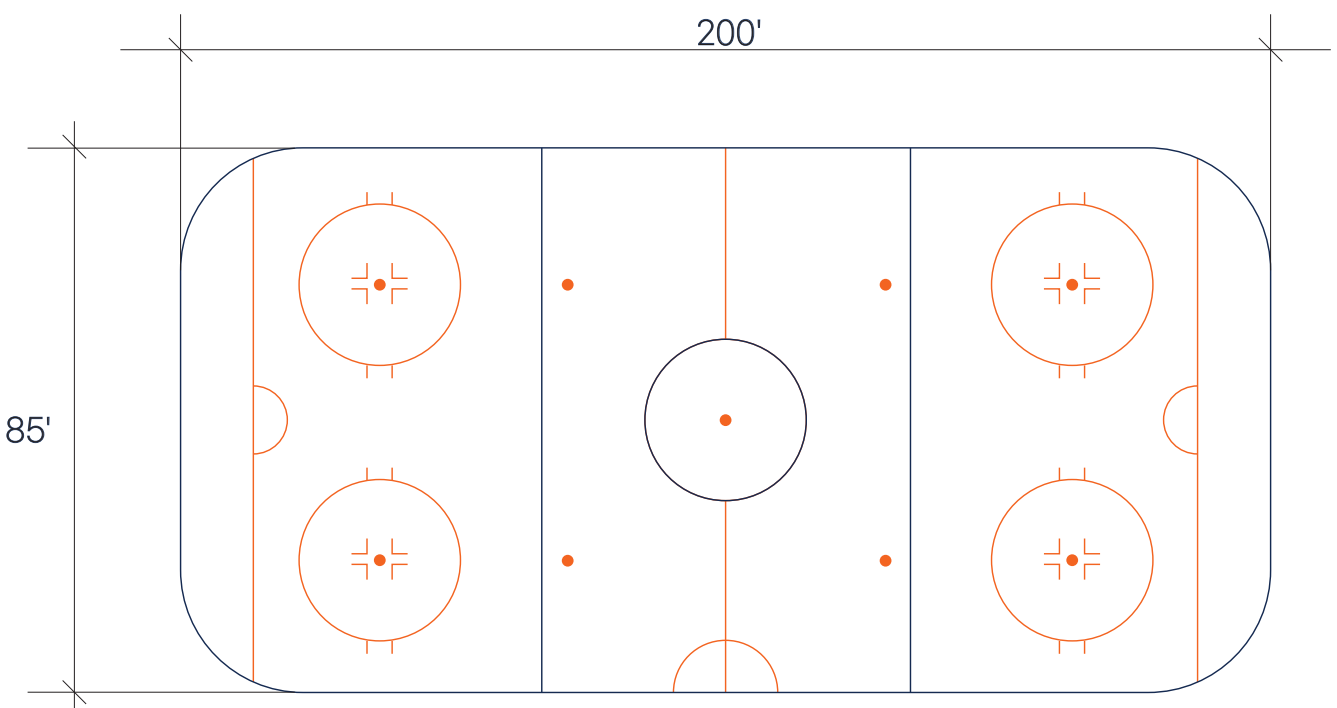




Fig. 39
Canada participating in their first
Winter Olympics ice hockey event
in France



Fig. 40
2019 NHL Winter Classic in Chicago.



Fig. 41
NHL outdoor game at Lake Tahoe.

in bleachers. This would mark Canada's first involvement in the ice hockey event in the Olympics, where the game took place outside, with the mountain range in the background (see Figure 39).³³ This typology was not necessarily an architectural intervention, but a simple method of creating a place for winter social activity. As a nod to the traditional way games were played in an outdoor environment, and also to Canadian heritage skating traditions being outside in the snow, professional levels of competition like the National Hockey League and their minor league associations are organizing outdoor matches. Typically, rinks are built within the compounds of a football arena as an independent structure to the stadium. This concept helps bring more people together to build the community engagement for the winter activity (see Figure 340). Having the rink within the landscape strengthens the connection users may feel to the land it sits on, most notably, Lake Tahoe, showing the Sierra Nevada, and again, a mountain range in the background (see figure 41).



Fig. 42 Seating in an arena.

The 'Arena'

"Sports brings community together, period."

-Rajashree Choudhury

The 'arena' refers to the "enclosed area used for public entertainment."³⁴ Emphasis on the 'public entertainment' part. The typology of the arena is more focused on the entertainment facet of the building, creating a more harmonious link to the ice surface (the rink) and the stands and viewer space (see Figure 43). It is more driven to how people experience the rink socially, and interact with the program happening on the ice. As there is dedicated seating in the arena typology, there is more opportunity to host outstanding events that are more seasonally driven, providing means for a socially driven centre, as opposed to the rink which lacks the spectating aspect. With the addition of stands and dedicated spectator seating, the architecture of arenas grew local social interaction by creating a venue space that allowed the community to come together in a tempered indoor space, to watch traditionally

outdoor sports. Howard Shubert writes: "even if 'hockey arena' may not be the correct term to describe these ambiguous buildings...they have nonetheless played a central role in their communities' cultural life...Arenas provided for the comfort of audiences as never before, with heating and air conditioning, more washrooms and food concessions, padded seats, restaurants, and bars."³⁵ These additions for the community domain directly speak to how the arena is more viewer driven building type rather than just a shelter for the ice surface. The sociability of the arena through integrated gathering spaces is what sets it apart from a rink.

Definition: arena
 "designed to showcase theatre, musical performances, or sporting events."

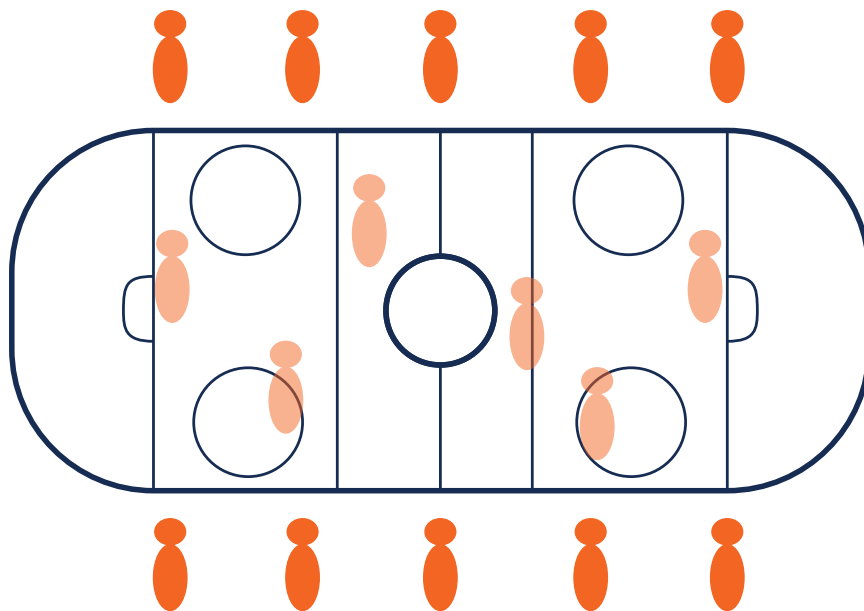


Fig. 43
 Arena typology referring to what is happening around the ice.

Due to the nature of the skating arena building typology being associated solely with winter, it is hard to pinpoint its origins. Though, the first artificial skating arena opened in 1841 named the Glaciarium, in London England as an event centre for public skating (see Figure 44). It was built for "the graceful... pastime of skating."³⁶ North America didn't see an arena until 1875 where the first game of organized indoor hockey was played at the Victoria Skating Rink, in Montreal, Canada.³⁷



Fig. 44
The Glaciarium in London, England.

An additional part of the importance of the arena is its role in becoming a community beacon in association with surrounding neighbourhoods' identity. In a conference about sporting facilities and its impact on community, Radu Sfintes writes, "Architectural objects must, in addition to meeting the requirements of the architectural program, become a symbol, an iconic element of the community in order to express the identity, features and aspirations of the community, in order for the community to be able to appropriate it."³⁸ The arena typology has adapted to be more than just a place of sport, but rather a place of community pride and celebration. Through its design intentions, an arena focuses on how the supporters can have a place to be social, in a conditioned space, tailored to their spectating requirements.

Within the context of this thesis, the hockey arena was used as a primary subcategory of the arena as a study, for a place to celebrate Canadian culture. Though, there are other arena typologies that exist in the realm of bringing community together through entertainment. Since arenas host more than just sports, it can be used as a place for community gathering rather than solely sport. An example of this is the amphitheater in ancient Greece (see figure 45), where fighting and theatre events were held to bring the community together in celebration and cheer. Another example of this would be larger stadiums. They can host skating events such as hockey games, and figure skating, but they expand out past sports and are able to host other venues like concerts and trade shows (see Figure 46).



Fig. 45
The colossus of Rome.

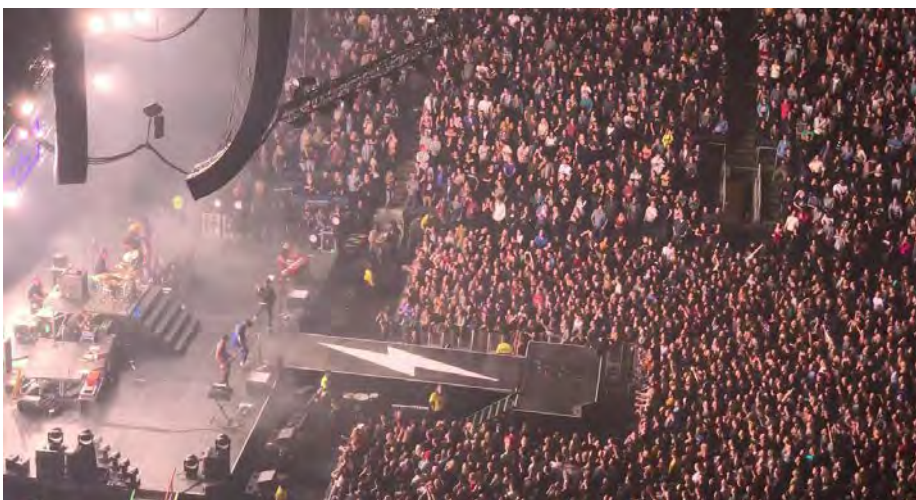


Fig. 46
Arkells concert at Scotiabank Arena.



Fig. 47 Aaniin Community Centre.

The 'Community Centre'

"The greatness of a community is most accurately measured by the
compassionate actions of it's members."

-Coretta Scott King

Finally, the community centre is the contemporary ideology of a sporting complex, which also serves at the community scale, having programs that speak to a wider range of community members. A community centre "promotes exercise...boosts the local economy...keeps adolescents safe...[and] provides a meeting space."³⁹ This building type speaks to the surrounding communal needs as well as a city's sporting requirements, creating a place for people to be social through various activities and internal programs (see Figure 48). This building typology is a direct response to how an arena can be promoted to a larger demographic of members of a community, allowing more outreach for a community's desires, socially. Community centres are important in creating a strong foundation of a neighbourhood connection to its place, as they are a beacon of the environment it sits in.

In Canada, a community centre typically focuses on four domains, including; fitness and recreation promotion, childcare, organized sports, and arts and culture celebration.⁴⁰ Since community centres and recreation centres are multi-purposed places that speak to an entire community's beliefs. This is why it's important to consider every aspect of a neighbourhood's current and future events offered. Having a building to host a wider variety of programs allows a deeper connection to its place, with respect to its demographics. It is critical that the building speaks to a place's existing ideas and beliefs, as opposed to inventing one for a community to adapt to. Sophie Joelle speaks to the importance of a community centre saying, "[Community centres] unites a community...The clue is in the name - community centres are all about providing a place for a community to connect and socialize. They're multi-purpose hubs that offer different things for different people."⁴¹ With emphasis on the term 'hub' looking at a centre of 'activity' and 'network,' it reflects the importance, again, of creating a space for the people. A space for people to be social.

Definition: community centre
 "a building or group of buildings for a community's educational and recreational activities."

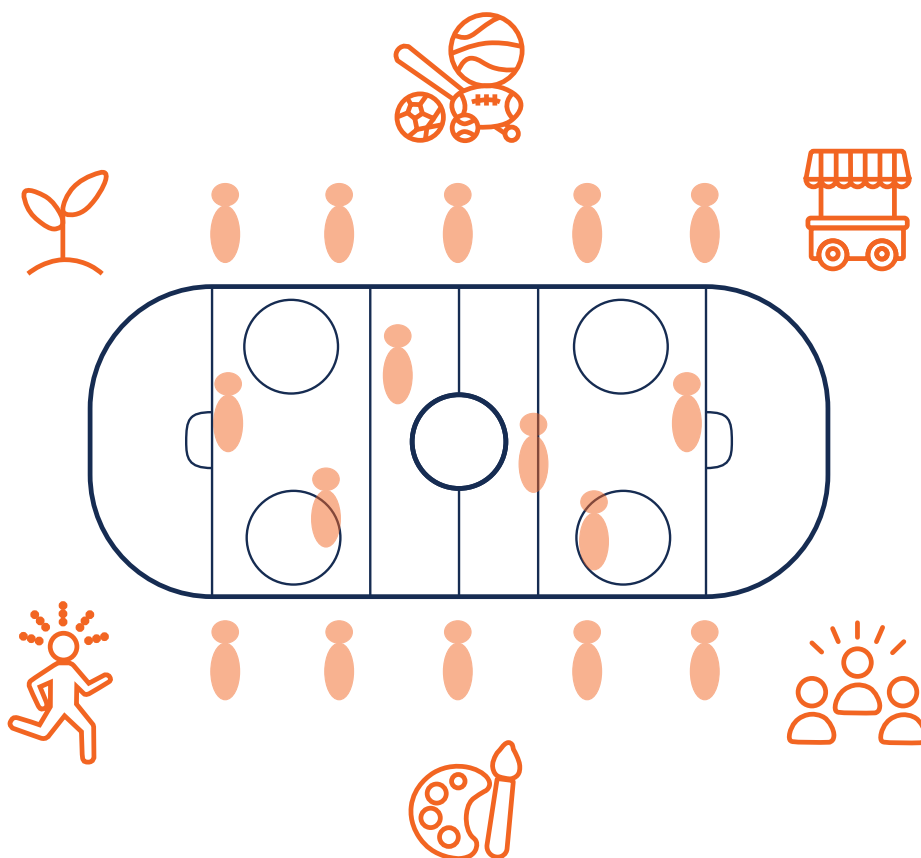
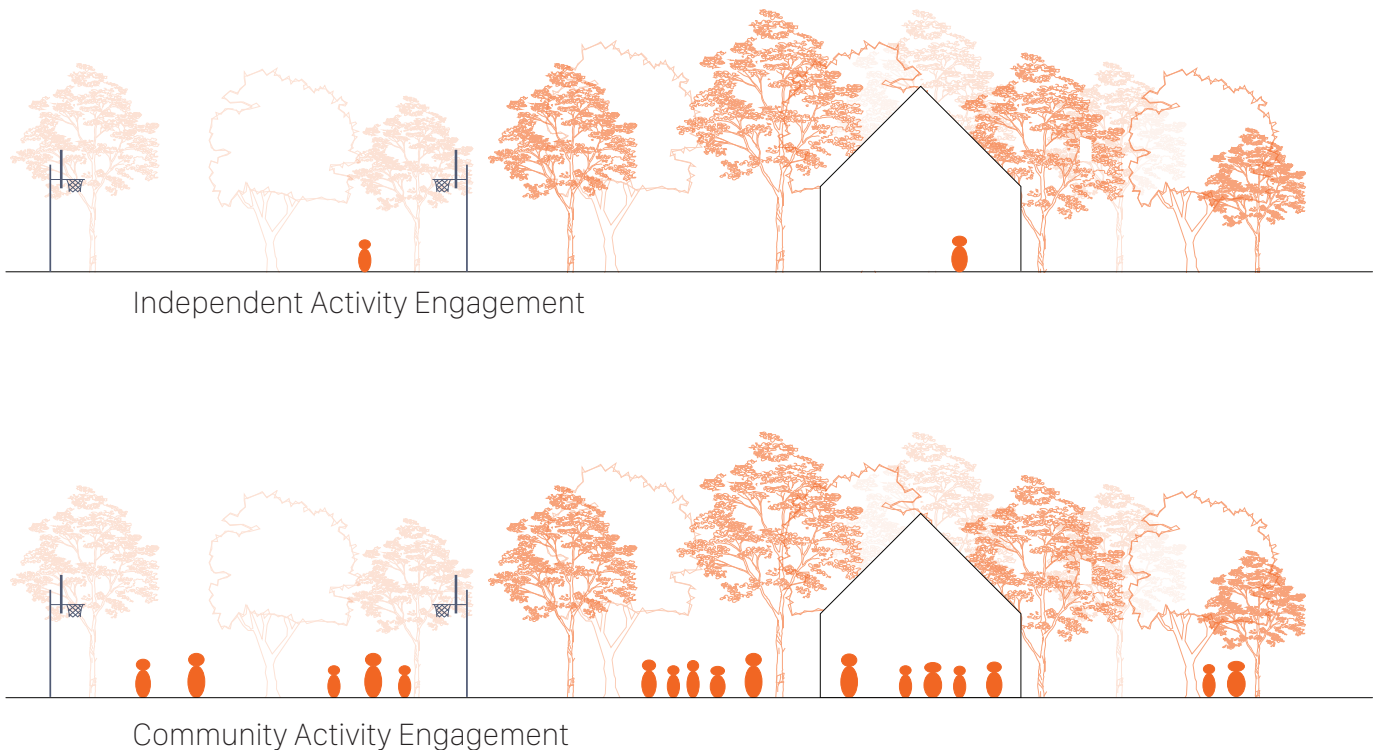


Fig. 48
 Community Centre Typology
 Referring to What is Happening in the building as a whole.

“When you take part in a family activity at your community centre, it brings a sense of accomplishment and joy, and that’s important because family time brings a stronger sense of connection within the family...When families participate in a family activity, it’s healthy for everyone involved.” These facilities also help families become stronger independently, as well as socially. Especially younger and newer families, there is opportunity in community centres to learn and grow through programs offered at these centres (see Figure 49). Since they speak to a larger demographic through various programs and events held within, including potentially community classes and workshops that can be tailored to any age group, as well as child care and daycare options, it also allows families to all participate in social events all at the same time, that everyone can enjoy.

Fig. 49
Independent vs community activity engagement.



Potentially one of the greatest causes of social deconstruction is the COVID-19 virus. Around the world, covid has not allowed for optimal social connection within a community. With social distancing and constant lock downs, people have adapted to a lifestyle where being at home in the confines of their house is the new normal. While the effects of social distancing are through, covid has created a social boundary, and the community centre building type has potentially been threatened the most, it is also the most critical building type to reintroduce social equity in communities. That is why having specific places and moments in and around the building is important in the rebirth of community celebration.

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Part 3



Fig. 50 Climate Pledge Arena.

Adapting Community Rinks

"The greenest building is...One that is already built."

-Carl Elefante

Adaptive reuse is an architectural technique that is "the re-purposing of an existing structure for new use."⁴³ This style of architecture branches the history of a site and the existing elements of the building, to modern programs and uses depending on the project. The idea comes from the increasing awareness to reuse existing building material to save resources, money, and time. Adaptive reuse in architecture is critical for the preservation of a historic building and the conservation of cultural significance of a place, as well as it helps urban sprawl. These themes are the basis for most adaptive reuse projects. Though adaptive reuse projects can be done from virtually any existing building, old factories, among other single use building types are popular through its existing historical stance on a site. Adapting building to new programmatic needs also allows more people to use the building in general (see Figure 51). Creating more programs and spaces to an existing building maintains its current community, if any, to a wider range of users through an enhanced community structure.

Adaptive Reuse

Fig. 51
Chain of adaptive reuse outreach.



Fig. 52
Old Cit Hall adaptive reuse in Boston, Massachusetts.

One of the first cases of adaptive reuse architecture is in Boston, Massachusetts, where the Old City Hall building was turned into an office building, in the mid 1960's (see Figure 52).⁴⁴ This reuse project was used as a successful example of redevelopment of an underutilized existing building. This has challenged architects and designers to create with the existing structure of buildings, which has led to creative and iconic buildings like the 'Elbphilharmonie Hamburg' in Germany, the 'Zeitz MOCAA' in Cape Town, South Africa, and the 'Tate Modern Museum' in London, England.

Definition: urban sprawl
 "the rapid expansion of the geographic extent of cities and towns, often characterized by low-density residential housing, single-use zoning, and increased reliance on the private automobile for transportation."

The three themes mentioned above play an important role for community growth through adaptive reuse as the members of the community can relate and connect to existing buildings through its history and heritage in a place. Adaptive reuse maintains cultural heritage. It continues to preserve the cultural significance of sites which the building sites in. Using the existing building shell allows communities to cherish the historic representation of their neighbourhood, maintaining importance of their direct place (see Figure 53). This is especially important in smaller communities that have a strong connection

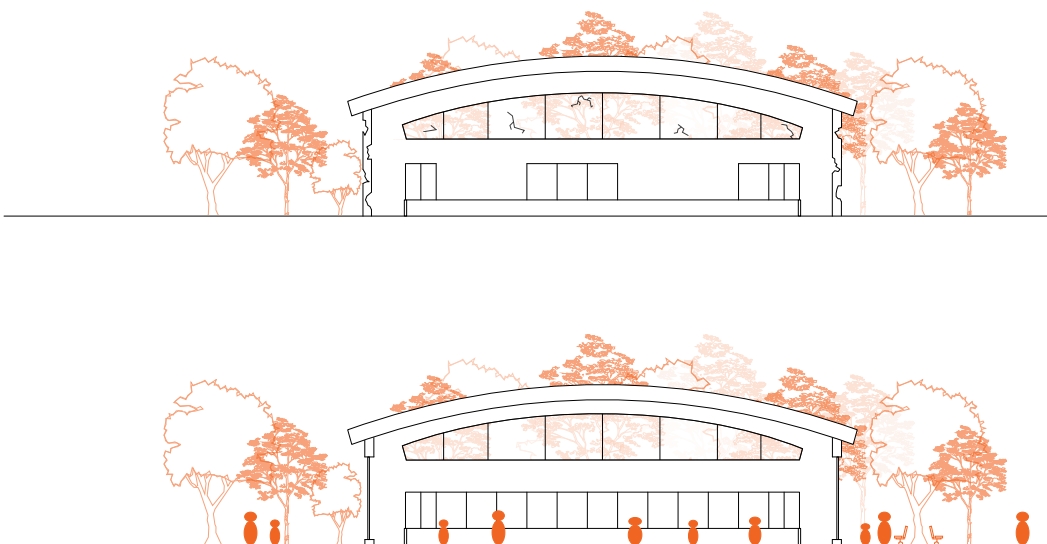


Fig. 53
 Preservation of historical buildings
 and conservation of cultural
 significance.

to a specific identity through history, where their community was grown through that one particular history or emergence. The skating rink at Exhibition park was built to celebrate Canadian heritage of winter activity, and like the Exhibition neighbourhood, as the name of the community speaks to, the place started as a fair for people to come together and that identity has stuck with the people even until now. So, including adaptive reuse is imperative to this project since the building program is in the public domain.

Adaptive reuse slows urban sprawl. Creating structures that are shaped from existing buildings creates a central revitalization for a site (see Figure 54). The key being revitalization of an existing urban space to give back to a community that is already present helps grow existing communities, as opposed to creating new underdeveloped communities on the outskirts of town. Re-establishing an existing site, which in this project's case is centrally located to its community, also helps bring people to the site and building. If a community centre for the Exhibition Park neighbourhood, which is practically located in the center of Guelph, was located on the outskirts of the city, its use would be almost meaningless. Through adaptive reuse, it gives the opportunity for users to access the public social spaces within the context of their neighbours and direct community. This ideology of adaptive reuse encourages concepts like "The Walkable City by Jeff Speck where cities can become more people oriented, and serve the community at the human scale."⁴⁵

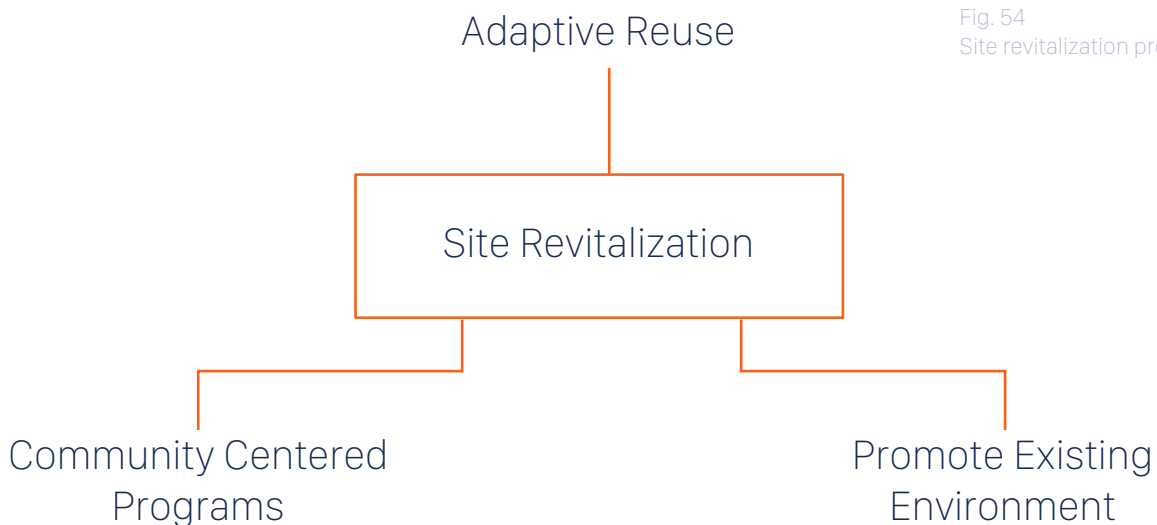


Fig. 54
Site revitalization process.

Adaptive reuse projects create a community beacon. "The biggest driving factor behind adaptive reuse is the ability to keep stories and memories intact."⁴⁶ To enhance an established building within a community speaks to the users that have already experienced the existing building, and helps to maintain an individual's memories and connections to a place. By having adaptive reuse projects, there is still a sense of connection to the site. If a completely new building were to emerge on the site of one's memories, the relationship to the site would be lost. Creating sustainable architecture can be a sense of pride for a neighbourhood, especially in a city like Guelph where the pride of green infrastructure is celebrated throughout the entire city. This is shown through their growing number of parks within the city, having the fifth highest percentage of share of parkland that is natural parkland in Canada.⁴⁷ To have an adaptive reuse project in the center of the neighbourhood can act as a community beacon, representing the community as a historically sustainable place.

Adaptive reuse in architecture is a more sustainable practice, and promotes sustainable design. Through adaptive reuse, building materials are saved and re-purposed to create the new architecture intervention. Without stating the obvious, reusing building material has a huge impact on net energy consumption in a project. The production of the material itself, the resources it takes, the transportation to ship the material to its site, the tools and equipment to be used in construction for a material, the production of the tools even, all are attenuated by its reuse. There is a branch of production that is done simply because a specific product was chosen as a building material. Adaptive reuse allows buildings to continue their life cycle and adapt into something new, sustainability, like in the instance of this thesis, transforming a skating arena into a community centre (see Figure 55).

Fig. 55
Building life cycle with adaptive reuse

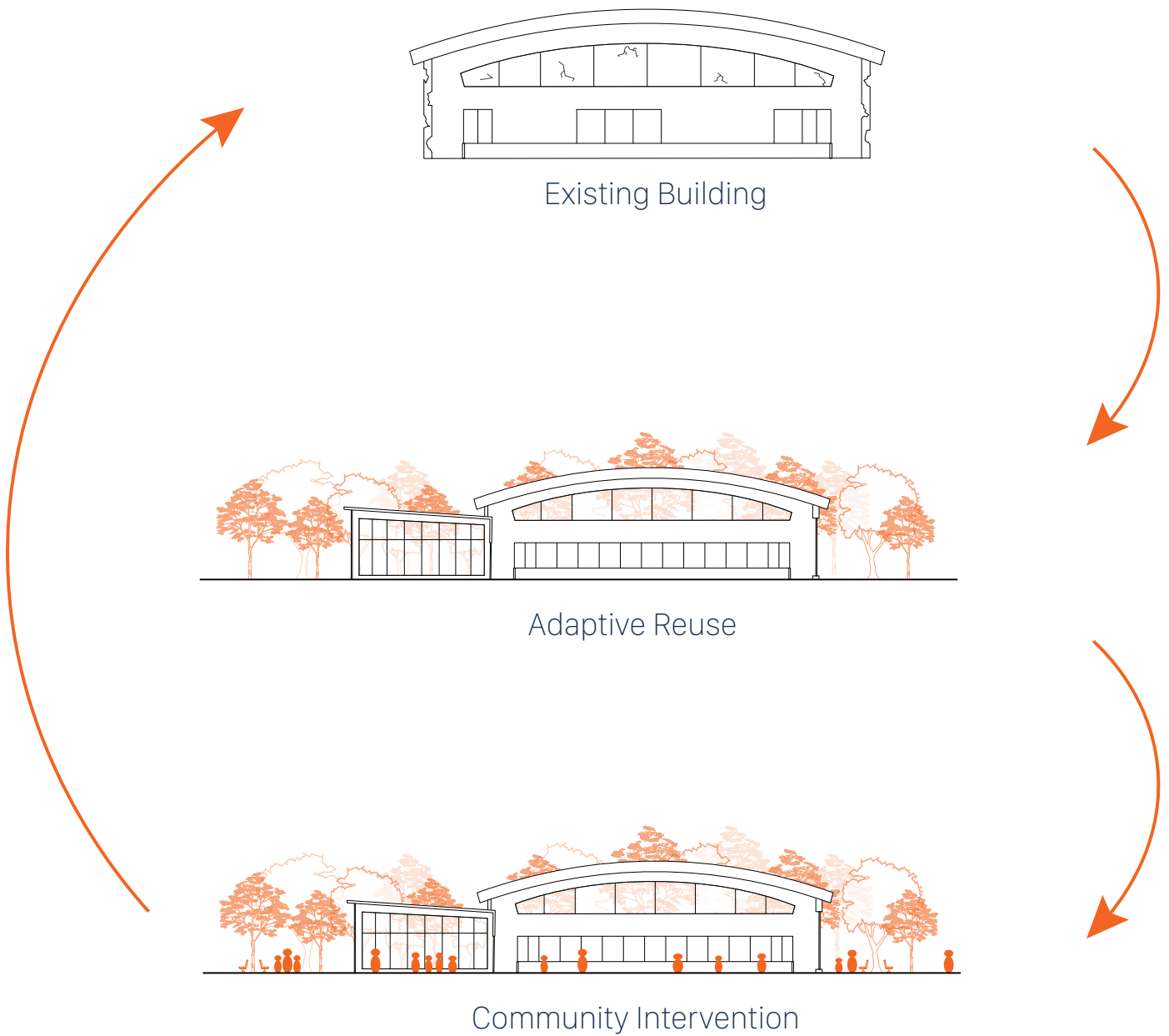




Fig. 56 Wood ceiling at Regent Park Aquatic Centre.

Case Studies

This section includes case studies that support the idea of creating spaces that speak to the communities ability to connect through social spaces and landscape design to allow users to have a direct connection between the building program and the corresponding outdoor green spaces.

A mapping study of each project was also done in order to better understand how the building itself, and its interior programming, connects to the surrounding landscape by a zone study method. This method looks at how specific traffic zones, in terms of landscape design, from the building to the surrounding nature are structured to create strong connections from the building to its immediate environment.



Fig. 57 Verdun Auditorium.

Verdun Auditorium

Verdun Auditorium is a renovation project located in Montreal, Quebec, and is the oldest, remaining arena in Montreal. This case study has similar features and has a corresponding context to the Exhibition Park Arena adaptive re-use project. Set on the end of a large park called Parc Arthur-Therrien, the Verdun Auditorium is renovation of an old rink which has served the community since the late 1930's.⁴⁸ This construction of the arena also included interventions in the surrounding park including an outdoor swimming pool, and other amenities along the river coast. The building has gone through multiple renovations to serve the surrounding community during its lifespan, responding to direct need for sporting and recreational activities in the Verdun area.

The construction of the arena itself was the first look at bringing the community together through creating jobs and activities during the great depression. From its beginning, it has been a symbol of community coming together to create something for the future generations to use, constructed in a time of struggle. This has held true from the continuous expansion of the park to serve the town of Verdun through the faucet of this historic arena. There have also been multiple events throughout its existence that speak to how this building as a place has helped bring the community together through its programmatic interventions.

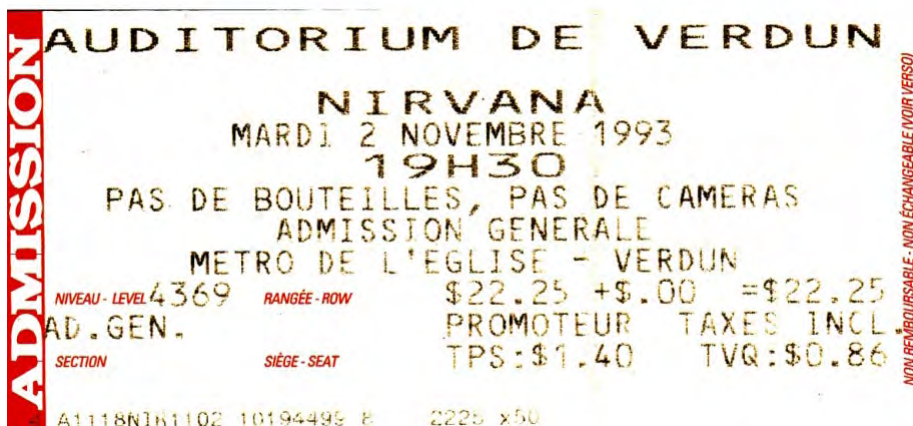


Fig. 58
Ticket to Nirvana band at Verdun Auditorium in 1993.



Fig. 59
Ticket of the first annual dance in the Verdun Auditorium 1930-1940.

The red brick building was inspired by the Art Deco movement in France in the 1920's, which adapted to Montreal through its light coloured, plain, and straight volumes.⁴⁹ The arena used this style to bring a sophisticated look to this public building in this community, a sense of pride of Verdun going to the rink. Prior to the modern renovation of the arena itself by FABG Architects in 2020 (see Figure 61), there was a renovation to the front facade of the building through the use of black painted siding to cover the red brick (see figure 60). Being an auditorium, the materiality in a sense 'modernized' the building opened to a more diverse social program including being an entertainment venue for concerts, and dances. Before the second world war, the auditorium was re-purposed as an armory for the Canadian Auxiliary Service Corp, who introduced the arena to different events such as dances to raise money for the war.⁵⁰ After the war, the building transformed back into an auditorium and arena, though it continued to host events like this to diversify its use, also opening up to other sporting events, and political stands and occasions (see Figure 58 + 59). It was even used in ceremonies to honour soldier performance in the war, again, hosting events that the community can come together for and build a positive social structure in Verdun.

The newest architectural intervention saw the removal of the black facade over the brick to re-expose the original building facade, as well as an addition of another rink to respond to the communities growth through sport. This renovation by FABG Architects used a primary corridor to connect the main street to the green-scape at the St. Lawrence River's edge. The architects looked at the historic building itself, and tore away the black metal envelope to resurface the brick finish, showing the historic value of the building itself. This addresses the idea of a more human scale place by bringing back traditional materials over modern coating which allows the users to have a greater sense of community from revealing the 'true' building frame. This strategy helps maintain the cultural identity of the building that allows users to have a connection back to the place with the knowledge of its historical significance.



Fig. 60
Verdun Auditorium prior to renovations.



Fig. 61
Verdun Auditorium after first renovation.



Fig. 62
Verdun Auditorium today.

The use of mass timber and transparent facades in the addition, with the acknowledgment of the large brick walls also allows users to have a greater connection to the rest of the park while in the building, through vistas and the ability to have direct access (see Figure 63). The materiality and architectural interventions from this building fosters connection from the interior spaces to the exterior spaces, which is green, creating a stronger connection to place for the users. The renovations open the building to more programs and events which further the communities ability to come together and become more socially equitable.

Fig. 63
Mass timber roof in the new
addition at the Verdun Auditorium.

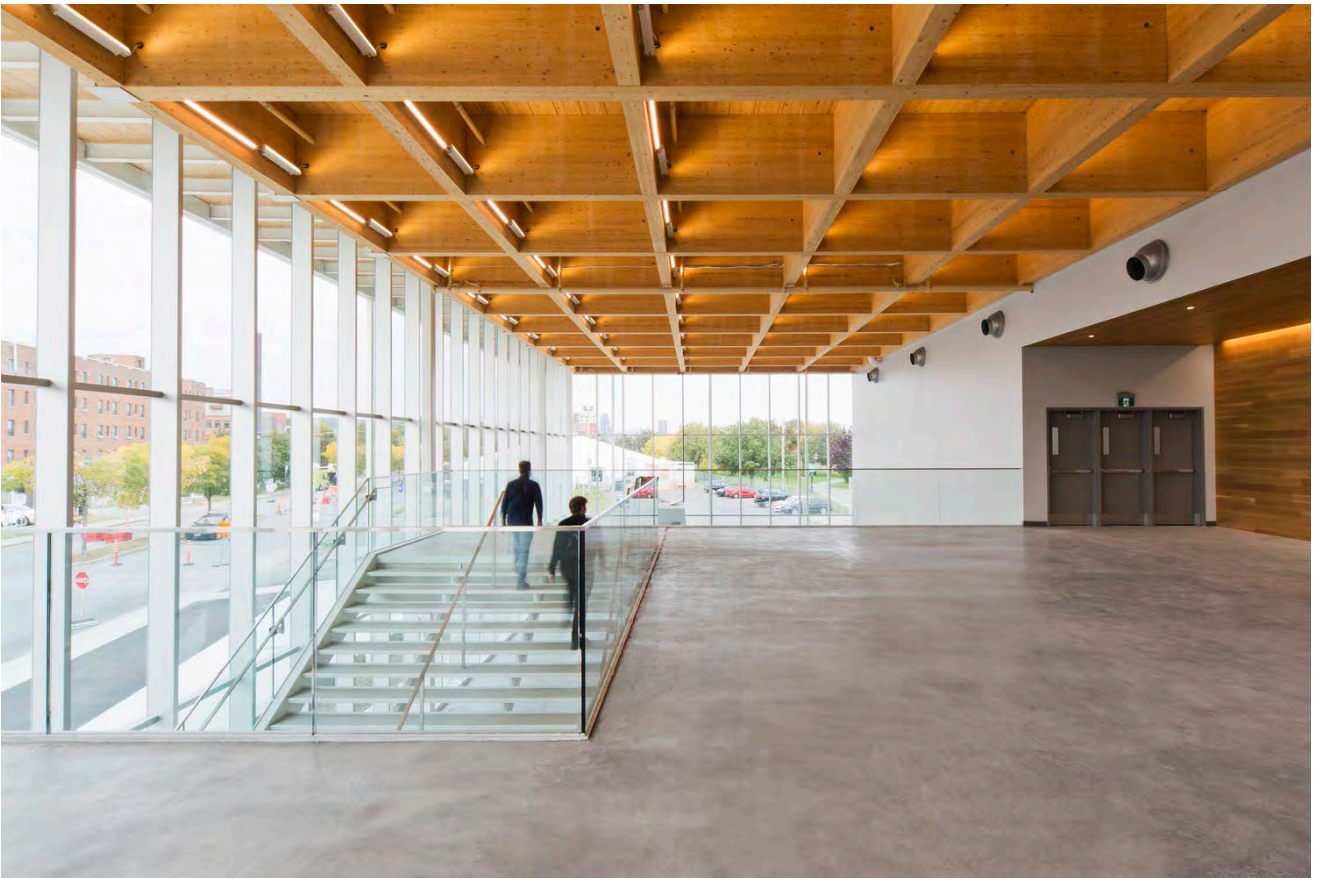
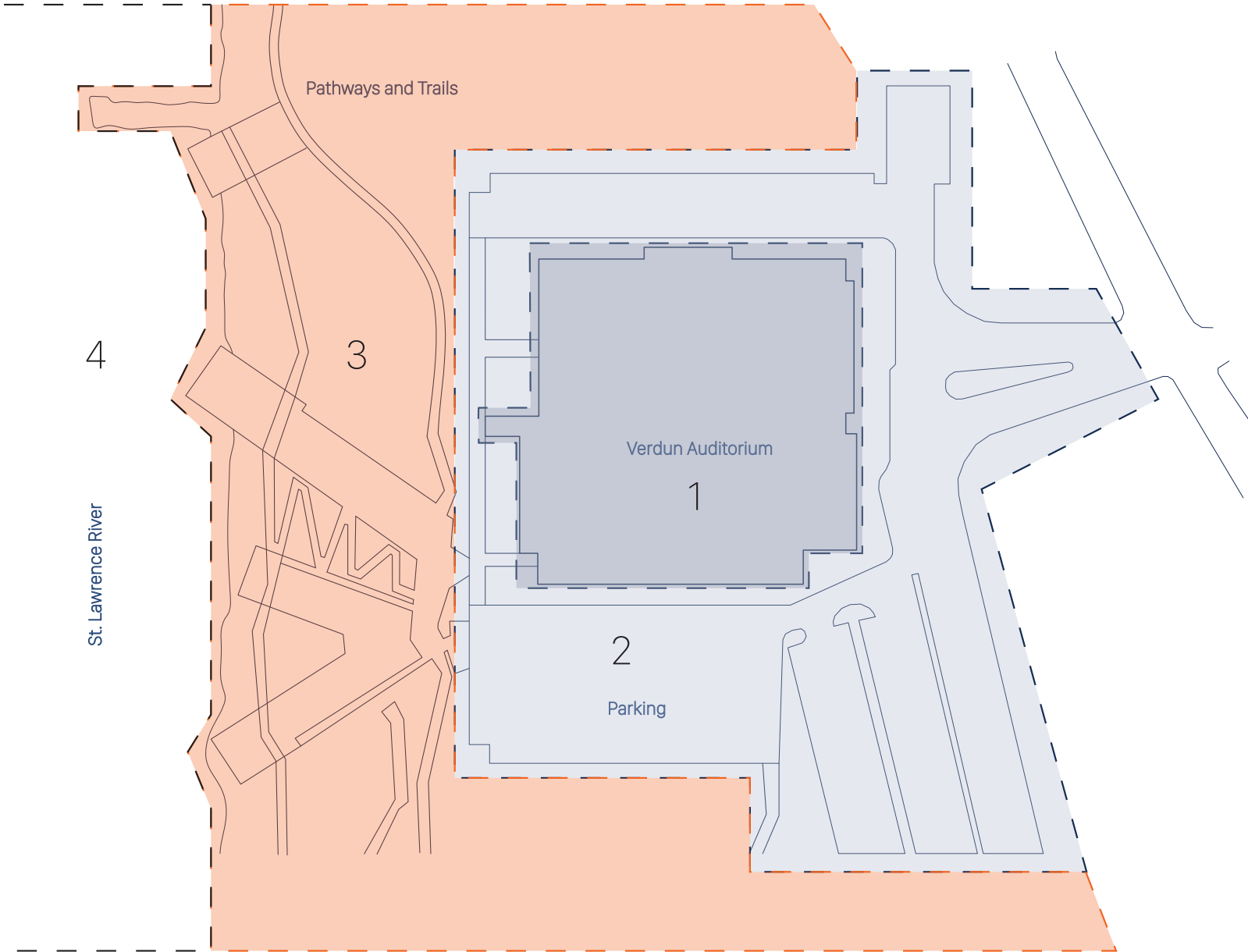






Fig. 64
Zone analysis of the Verdun Auditorium



-  Zone 1 - Existing Building
-  Zone 2 - Structured Pathways
-  Zone 3 - Unstructured Pathways
-  Zone 4 - Environment

The exterior landscape design allows for a transition between the hard street scape to the soft green scape, creating a seamless transition between the built environment and the natural space. Part of the auditorium's success comes from the ability to interact with the surrounding park and trails that run along the river. Looking in a cross section from the street (Bd Featan Laberge) to the river (St. Lawrence River), the different zones of trails and pathways that respond to the topography let users to interact with the building on a service level, but respect the existing park's natural condition. Each zone directly reacts to its surrounding zones which create a fluid transition from waters edge, the street infrastructure. From the water's edge to the trails, there is minimal program intervention to refrain the landscape from human intervention, while still allowing users to use the space openly, how they wish. The zone from the trails and landscape to the auditorium facade, are more structured pathways. This section allows for more accessible traffic between the building and green scape, creating an in-between space from the landscape, to the built environment. Where the structured zone 2 pathways meet the parking lot on the sides of the auditorium, there is a lack of connection to untrusted paths and green space, having a paved landscape helps emphasize the importance of the natural connection between the building and the park it sits in. Understanding the requirement of parking lots, there is still opportunity to create a more permeable parking lot, and allow plants to begin to grow around and through these zones would help the building transition from human made, to naturally grown sectors (see Figure 64 + 65).

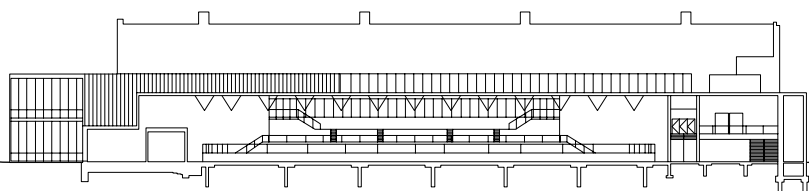


Fig. 65
Section of Verdun Auditorium.



Fig. 66 York Recreation Centre

York Recreation Centre

York Recreation Centre is a project in North Toronto that was created to support the multicultural neighbourhood it sits in. There was an adaptive programmatic study with the local residents to create a space that can be used extensively by the supporting community. There was a lack of athletic venues and social gathering space in the neighbourhood that the building responds to directly. The idea of the recreation centre is to be a "catalyst for social, environmental, and urban growth."⁵² The program includes; multi-use spaces, a gymnasium, aquatic centre with a pool, a recording studio, and a community kitchen.⁵³ Similar to the proposed adaptive reuse project at Exhibition Park, the York Rec Centre is in Keele South Park with the Black Creek River running through it.

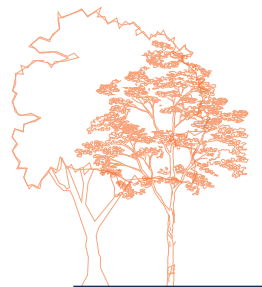
Perkins and Will Architects looked at the protection and conservation of the floodplain it sits around (see Figure 67). The building directly connects to its surrounding landscape through its emphasis on creating a natural relationship with the ground. There was a process of an urban renewal to create a responsible development that speaks to the programmatic needs of the community. Similar to how the Verdun Auditorium is an existing symbol for the community's historic context, this new building now asserts itself as a symbol of a place for



Fig. 67
York Recreation Centre grass
landscape.

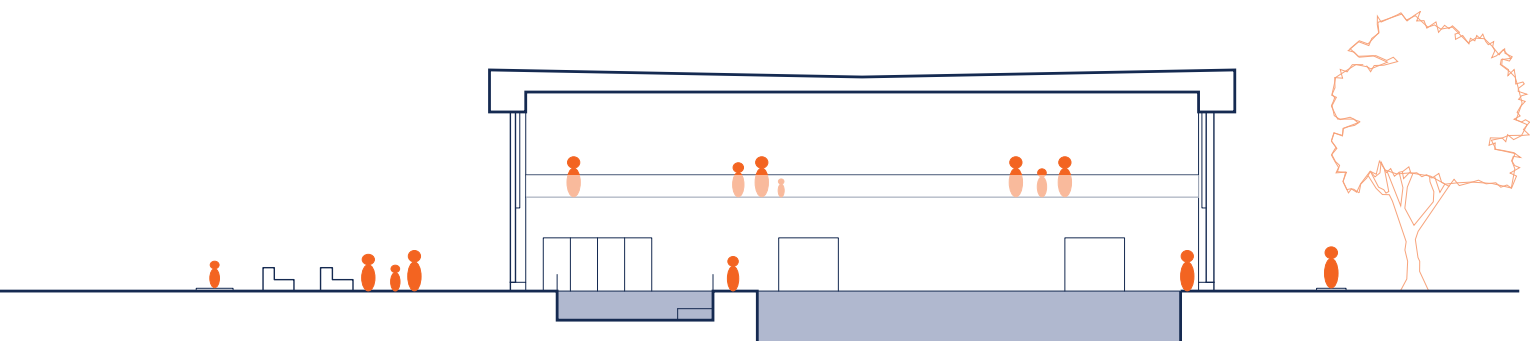


Fig. 68
York Recreation Centre curtain wall.



the community, which consciously responds to the sensitive natural environment. It is also a symbol of social encouragement through the open programming and public spaces available around the site (see Figure 68). It becomes a place of social growth and collaboration, which the community didn't necessarily have before. Toronto mayor John Tory comments, "the community was integral to the development of this phenomenal facility that will serve as a space for residents to gather, learn and play together for many years to come (see Figure 69)."⁵⁴ He says this in the context that through the community collaboration, a space that is ultimately for the public was created in part by them, and there is a sense of pride and a more personal connection to this place. The building reaches the Toronto Green Standard through its sustainable features, including; a rainwater and sunlight harvesting system on the green roof, methane exhaust for the soil, and passive implementation like bios-wales and indigenous gardens. Advocating for green spaces and active energy systems also informs the community on how to create a more environmentally sensitive environment.

Fig. 69
Section through pool at York
Recreation Centre.



With the rec centre being built in an already established park, the exterior design allows for users to step off the trail, and use the open pathways and patio to reach the interior. The exterior walkways extend out towards the sidewalks to help create connections around the site as well. The zone connects the ravine and creek to the open grass area, again, allowing for a variety of un-programmed activities. There is enough space between the building facade and ravine for people to use the outdoor space how they desire. The architects found a successful transition between the built and natural environment by creating space for activities, in the transition zone, that are open enough to have a variety of activities (see Figure 70).

The building has large glass curtain walls to create a visual link to the outside green space from most of the interior. This is important for buildings with public programming to be transparent, in the literal sense, for the feeling of safety for users inside as well as it creates a more calming space that supports positive mental health. "Nature is everywhere, but high quality nature isn't available equally."⁵⁵ It is one thing to place a building within nature, and another for a building to adapt to its surrounding environment. The York Recreation Centre is a prime example of architecture that connects back to its landscape that allows the community to directly contact a green space that is not touched by human intervention. Large interior curtains help control interior temperatures and glare, while still being able to maintain visuals to the outside at the human scale. From the interior, users have direct vistas to the surrounding vegetation, while from the exterior, users are able to see the vegetation from the reflection off the curtain walls. The building is a reflection of its surroundings through this architectural intervention and creates a more welcoming space through its association to nature. The active systems in this recreation centre, like the green roof, solar panels, and other energy systems, also present as part of the solution to creating a building that relates back to 'place' and allows the community to have a space which directly responds to its immediate environment.

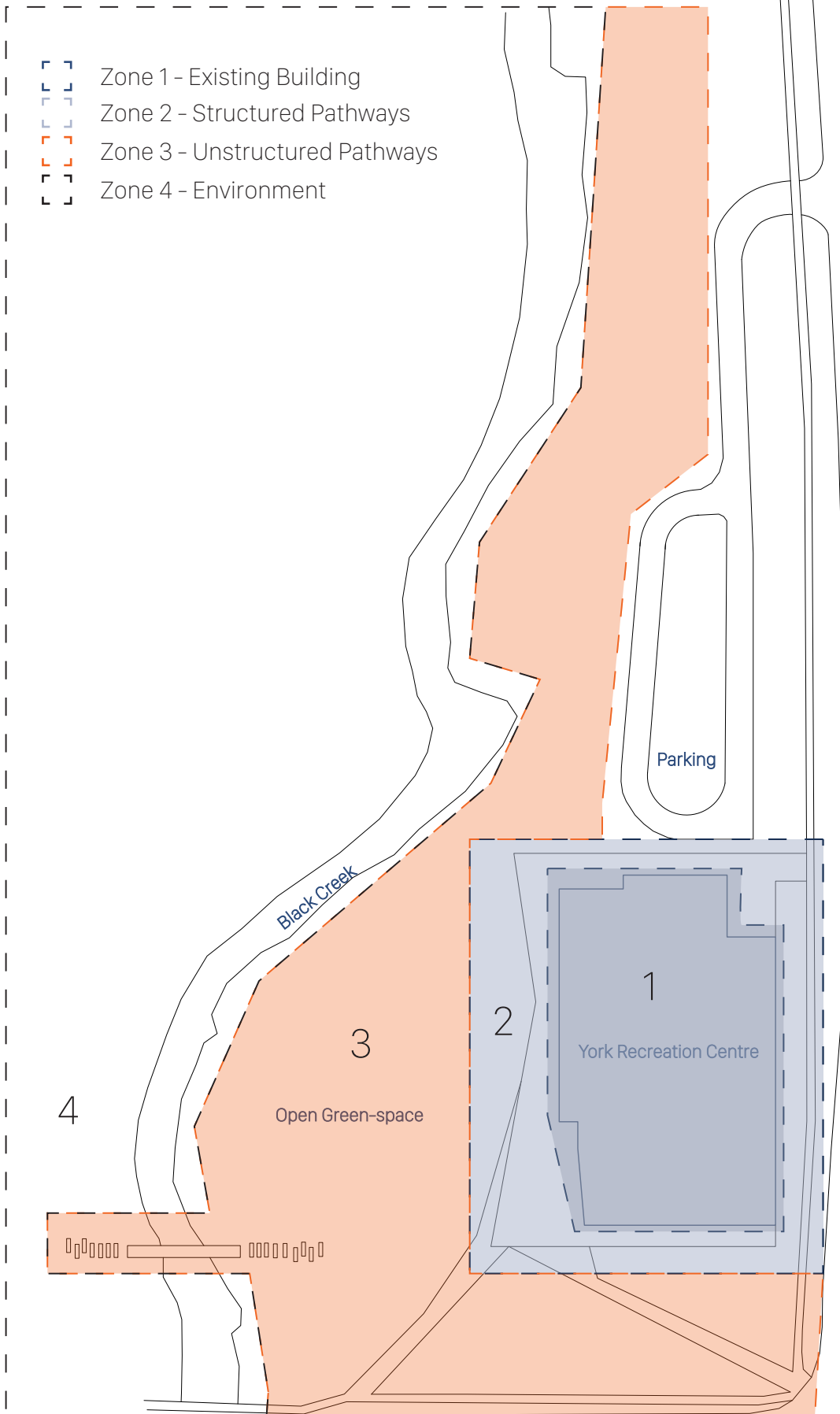


Fig. 70
Zone analysis of York Recreation Centre



Fig. 71 Evergreen Brickworks.

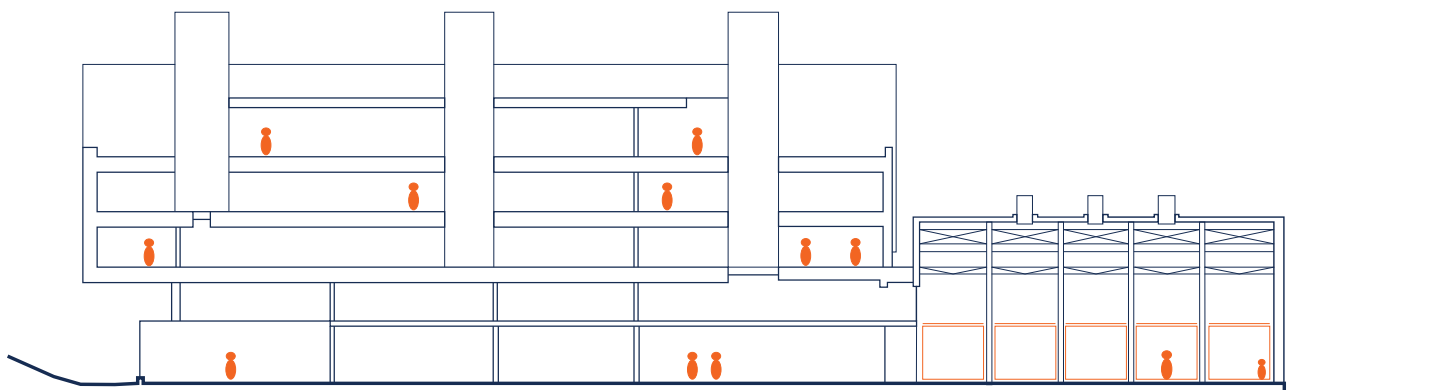
Evergreen Brick Works

Evergreen Brick Works Skating Rink is an adaptive reuse project based in Toronto, Ontario, by Diamond Schmitt Architects.⁴⁴ The building was originally an old brick factory, which has given an updated programmatic identity to meet the current desires of its community. The project aims to create a social equity space through a communal program that allows members to do a range of activities. The adaptive reuse reflects the sustainable message the program offers through passive strategies and a low-carbon cycle of construction, which speaks to sustainability and energy efficiency to the community. The programs are built around the themes of environmental and cultural sustainability.⁴⁵ This revitalization project is a successful attempt to turn an invasive old factory building into a communal space that reaches back to the environment. This is through the passive sustainable processes, including bio-swales and passive cooling interventions, and through programs held within, including farmers markets, skating in the winter, and education programs to teach sustainability.

There is a versatile covered outdoor market space and skating path, depending on the season, which allows users to have an indoor/outdoor skating environment. Each side of this place has a series of garage doors which open up to create a unique indoor/outdoor space, to create a stronger connection to the natural surrounding environment (see Figure 72). During the winter, the doors can open to create a natural flow of indoor/outdoor skating paths for people to use the space how they feel. Having a choice in how one uses a space creates a stronger connection to place as it allows users to freely use a space as opposed to more strict guidelines of how to use the building. If there is a winter market taking place, the garage doors can close to create an interior semi-conditioned space that allows for use all year round.

Definition: community centre
"a building or group of buildings for a community's educational and recreational activities."

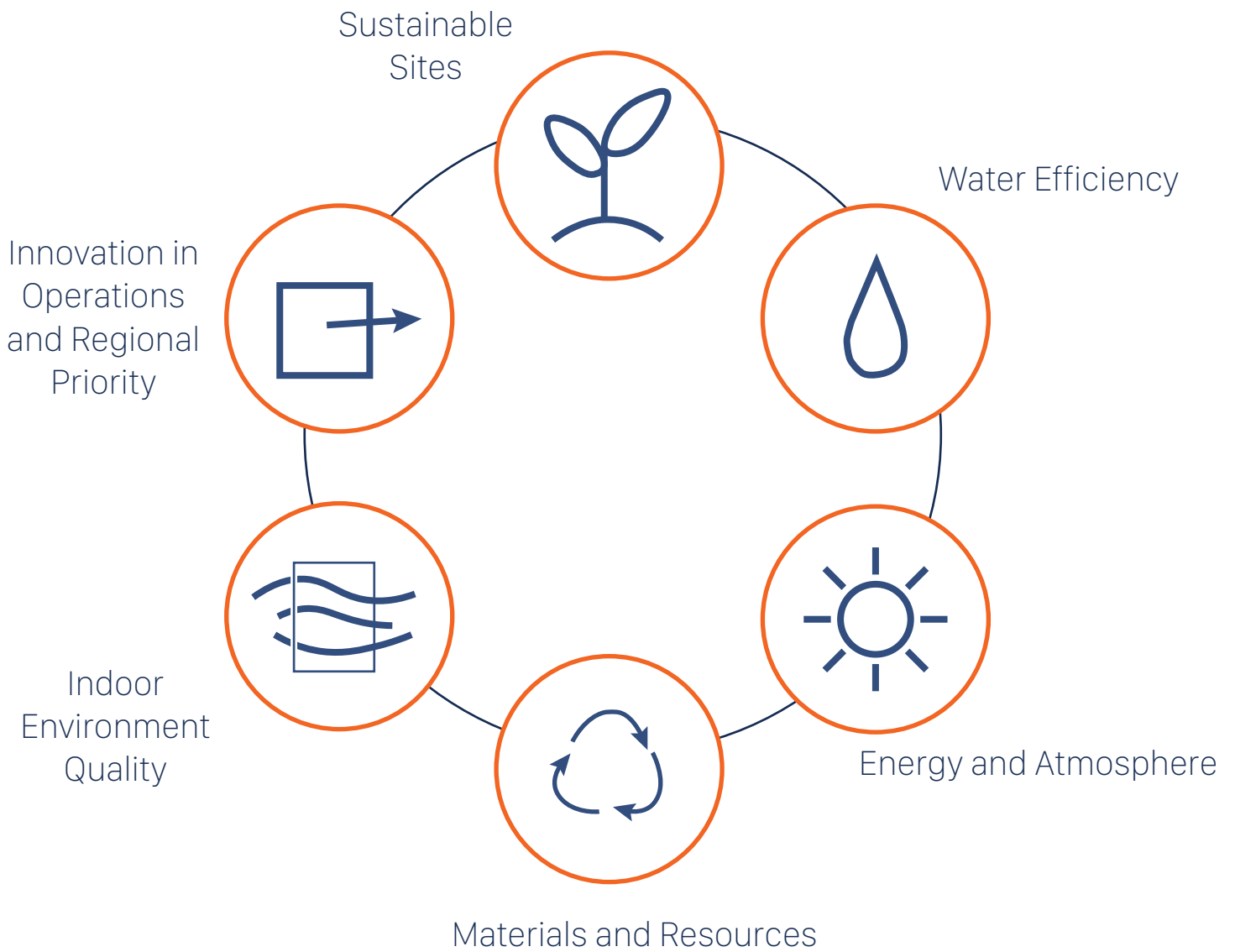
Fig. 72
Section of Evergreen Brickworks buildings.







The fact that this is an adaptive re-use project addresses how the designers felt this existing and dormant building can actually be converted into something that gives back to the community. At the same time, it does not take away from the natural environment the community is in, as it challenges a site that has already deconstructed the vegetation of a place, and existing green space does not need to be exploited for a new architectural intervention. The existing building facade is red brick and has an industrial style on the interior of the public spaces. This is a reflection of what once was on this site and how it's grown to become a place that is sustainable, through its LEED Platinum rank (see Figure 73).⁴⁶

Definition: LEED
"the most widely used green building rating system."

Fig. 73
LEED sustainability categories.



-  Zone 1 - Existing Building
-  Zone 2 - Structured Pathways
-  Zone 3 - Unstructured Pathways
-  Zone 4 - Environment

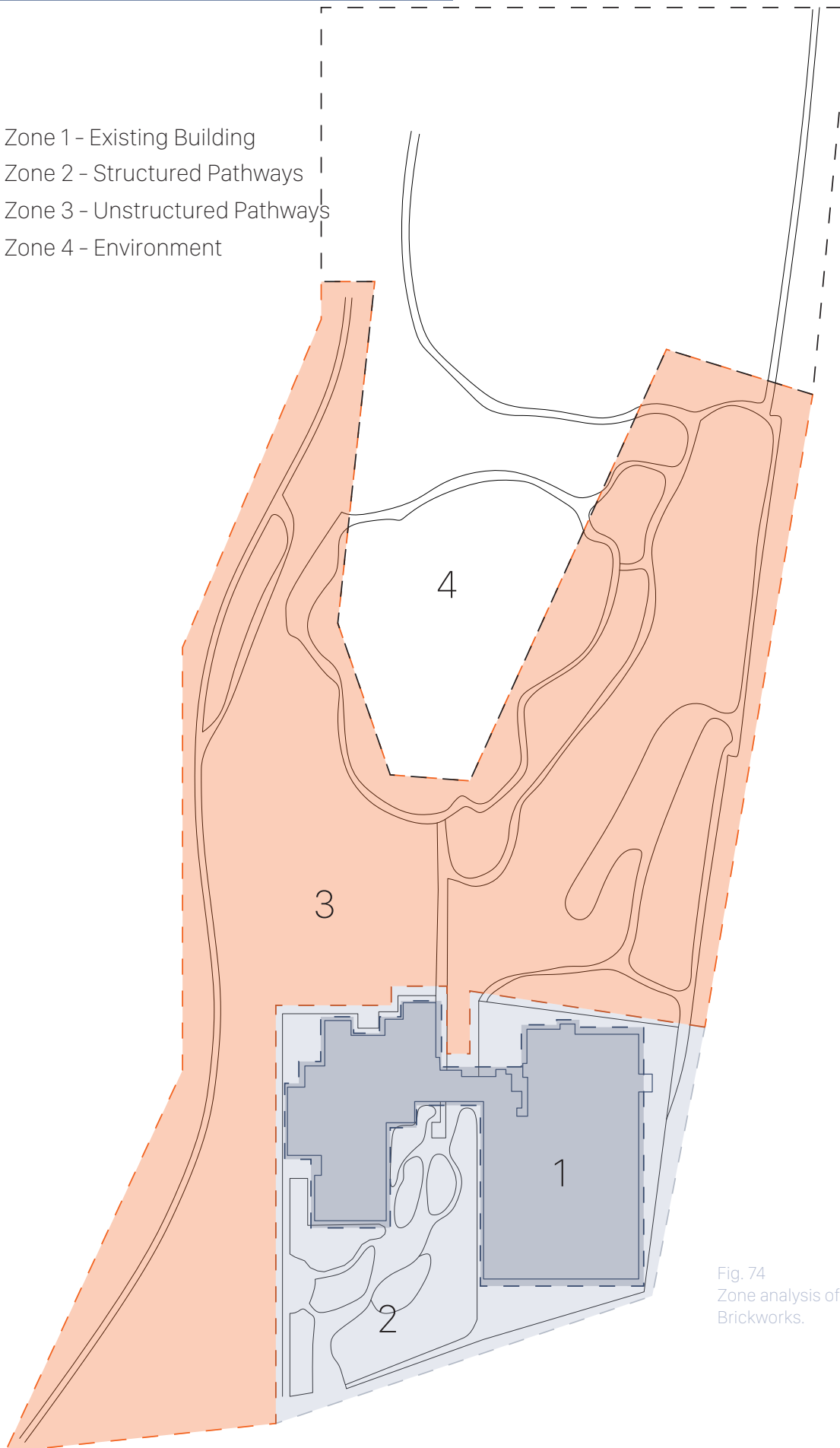


Fig. 74
Zone analysis of Evergreen
Brickworks.

Looking at the zone map, there is a strong connection from the multiple buildings on site, to the surrounding natural environment (see Figure 74). Looking at the connection between zone 1 and zone 2, the building footprint to the direct pathway surrounding it, there is a linear and accessible round in which users can travel from parking to the buildings itself. This is also reflected in The Tiffany Commons garden. This allows users to be outside and enjoy the greenery, while also efficiently traversing the site through the different buildings and programs offered. Moving to zone 3, shown as the unstructured pathways and trails around the site, it offers users the options to move deeper into the surrounding environment. Considering this building's location in a long belt of green space and parks, it is critical for this site design to include a direct connection to these trails that lead to other parks.



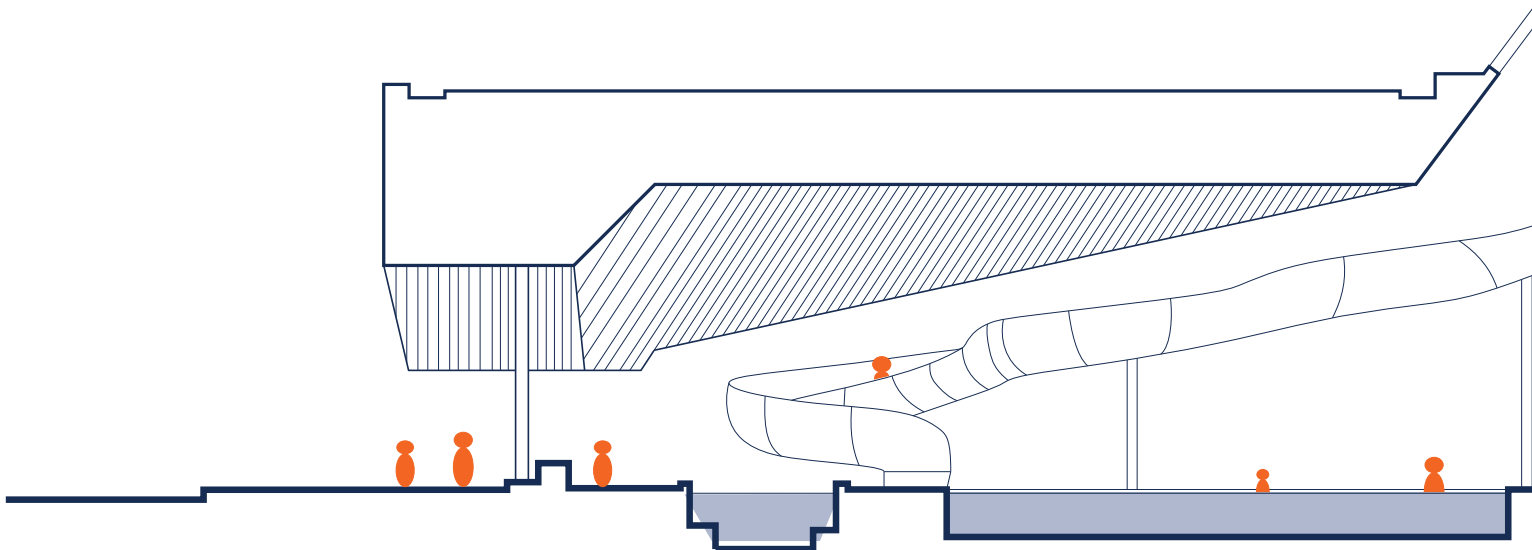
Fig. 75 Regent Park Aquatic Centre.

Regent Park Aquatic Centre

Regent Park Aquatic Centre is a community centre in Mississauga, Ontario, designed by MacLennan Jaunkalns Miller Architects. The project is a revitalization of the park, to create a social space within a low income district.⁵⁸ Referred to as the 'Pavilion in the Park' it provides a canopy for the community users, as an interior public space, and on the exterior around the building as a covered space, to allow them to use the building even when it's not open or operating. It also creates social moments on the exterior of the building throughout the season as the covered cantilevered roof passes beyond the building facade. The centre is a prime example of a successful community space that speaks to the needs of the direct surrounding residents, by introducing a program and layout that is useful throughout the year for the occupants. Regent Park is "Canada's oldest and largest social housing project, built in the late 1940's."⁵⁹ To have a strong community building in a low income housing district allows users to gain on more social

and communal leisure that is accessible financially. This brings the communal together and offers potential for growth, which acknowledges the social situation of a community.

The building maximizes natural light to give an open feeling, and to create a visual connection to the surrounding environment as the building is located at the end of a park (see Figure 77). The transparency of the facade also creates a sense of safety and openness for the users as there is more connection to other users on the site. The glass facade is built in a way where the visual connections are focused at the human scale, creating views in a horizontal fashion. The interior has a white colour, and wood finish. This gives the interior space a brighter feeling, as well as creates a stronger connection to the green space it is in with the wood materiality. The skylight at the center point of the building also reinforces the concept of bringing in more natural light to create vibrant spaces. Finally, this community centre is a low rise building, only rising to one story tall. This is important in the connection to the human scale, again, for the users. Located in a generally flat park, the building does not feel out of place and tower over the green space outside.



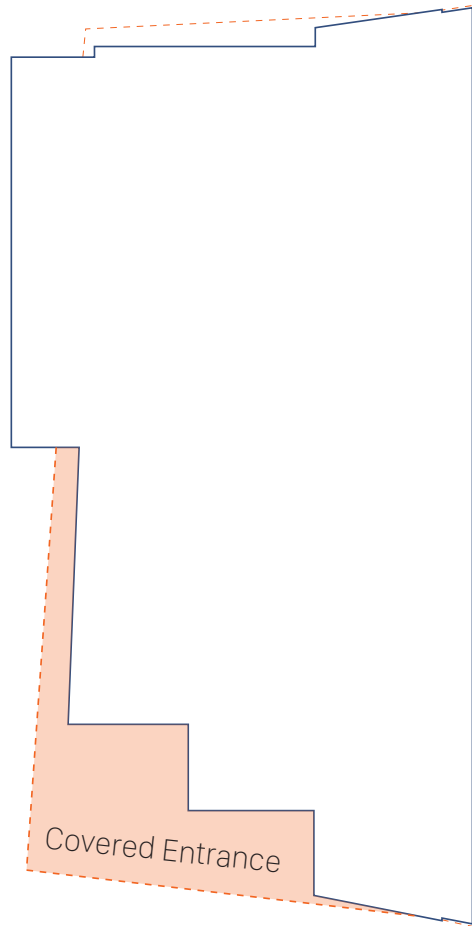


Fig. 76
Covered social space at entrance of
Regent Park Aquatic Centre.

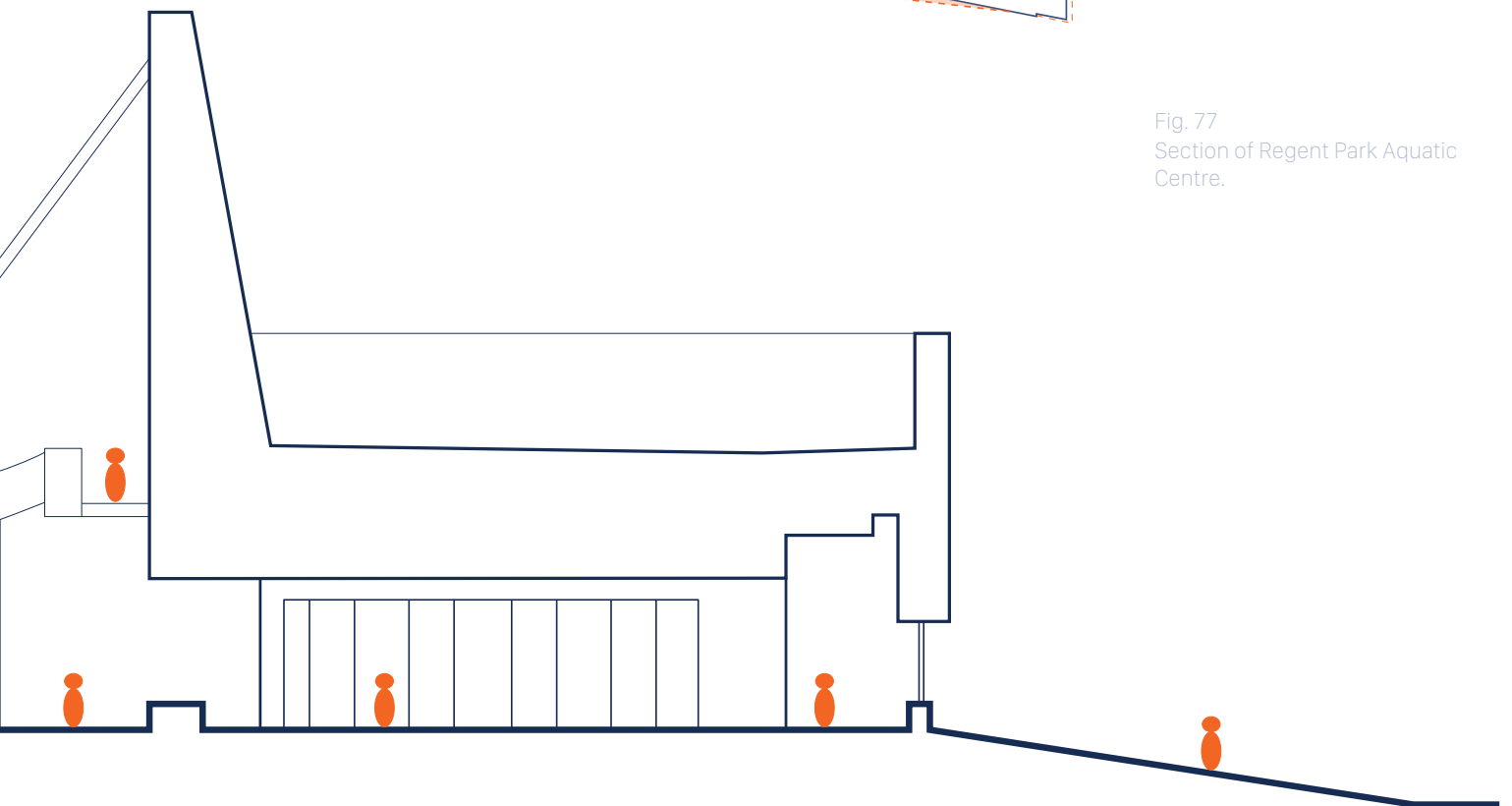


Fig. 77
Section of Regent Park Aquatic
Centre.

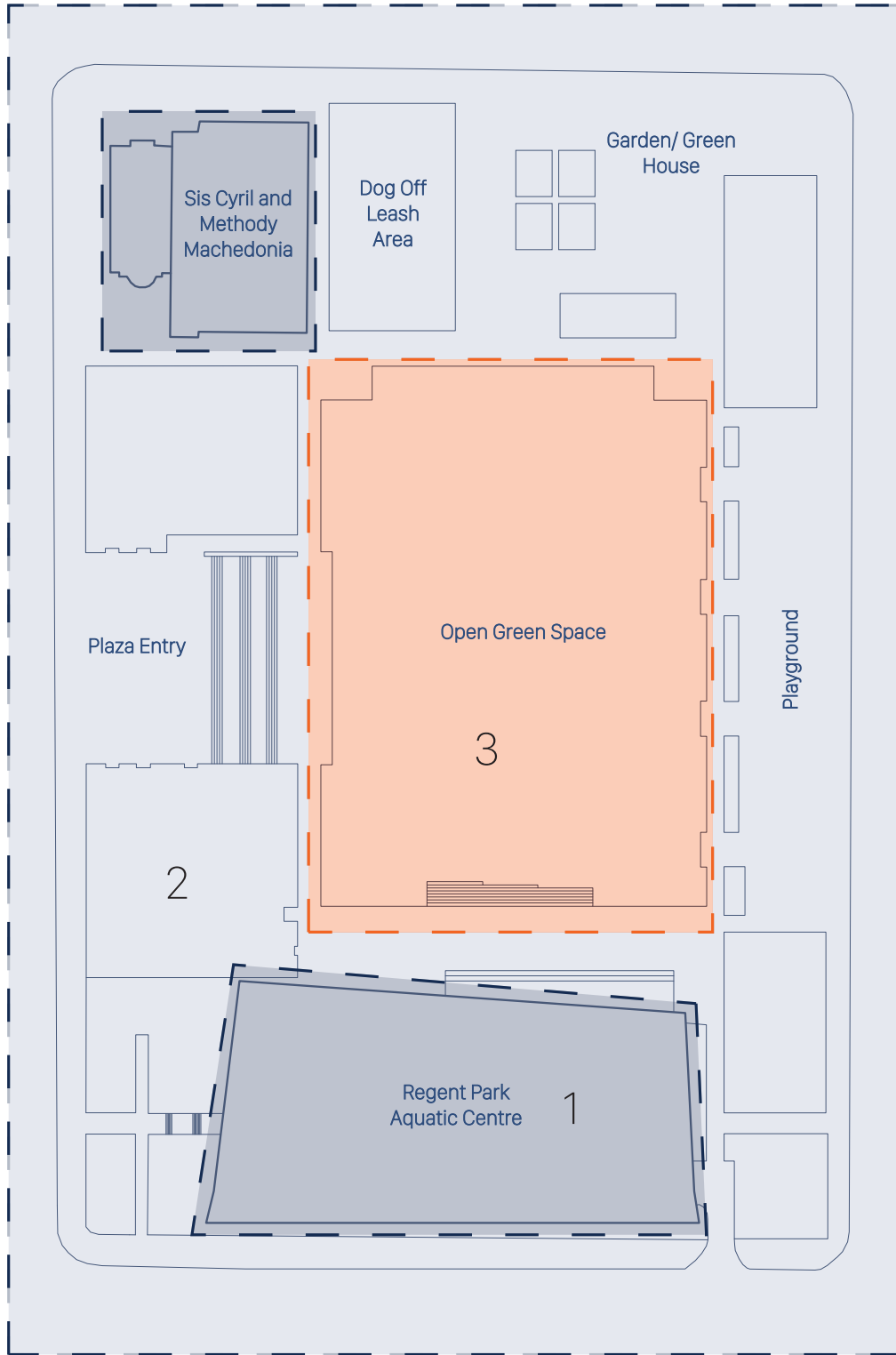






Fig. 78
Zone analysis of Regent Park Aquatic
Centre.

-  Zone 1 - Existing Building
-  Zone 2 - Structured Pathways
-  Zone 3 - Unstructured Pathways
-  Zone 4 - Environment

Looking at the exterior site zones, there is a reasonably good connection between the building and the park itself (see Figure 78). Surrounding the building, is a small paved pathway to allow users to transition from the street, to the community centre in a safe manner. This in between zone has structured entrances and connections to green space for users to socialize in an open method, where comfortable interactions can take place virtually anywhere. Since the park is in a dense neighbourhood with minimal green space, outside of the park itself, there is not much connection to unstructured paths through the park. Though, the transition between the structured paths in zone 2 and the natural green space is efficient with introduced topography to create more dynamic outdoor spaces. The descending staircase from the community centre to the grass field creates a safer feeling space by protecting the perimeter with hills and gardens. Lowering the grass area also creates a feeling for users to be more embedded in the environment, where the direct surroundings are green, as opposed to concrete.

Looking at these examples of community buildings with successful outdoor spaces in conjunction with its environment, it is important for a thriving social space to have the ability to interact with both the community centre and the landscape it sits in. Through each of these case studies, the architect has shown the landscape around the building is just as, if not more important than the architecture itself. Creating vistas and accessible connection to outdoor social spaces brings a stronger sense of community through its engagement with the site. The transparency also creates a safer environment through the open atmosphere created by curtain walls. Finally, having a hierarchy of exterior pathways leading to the building, and around the site is critical for engagement with the building and landscape. The riverside of the Verdun Auditorium is the best example of an eminent transition zone from the building, to a structured accessible pathway, to unstructured trails within the environment, to the environment itself.

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Part 4

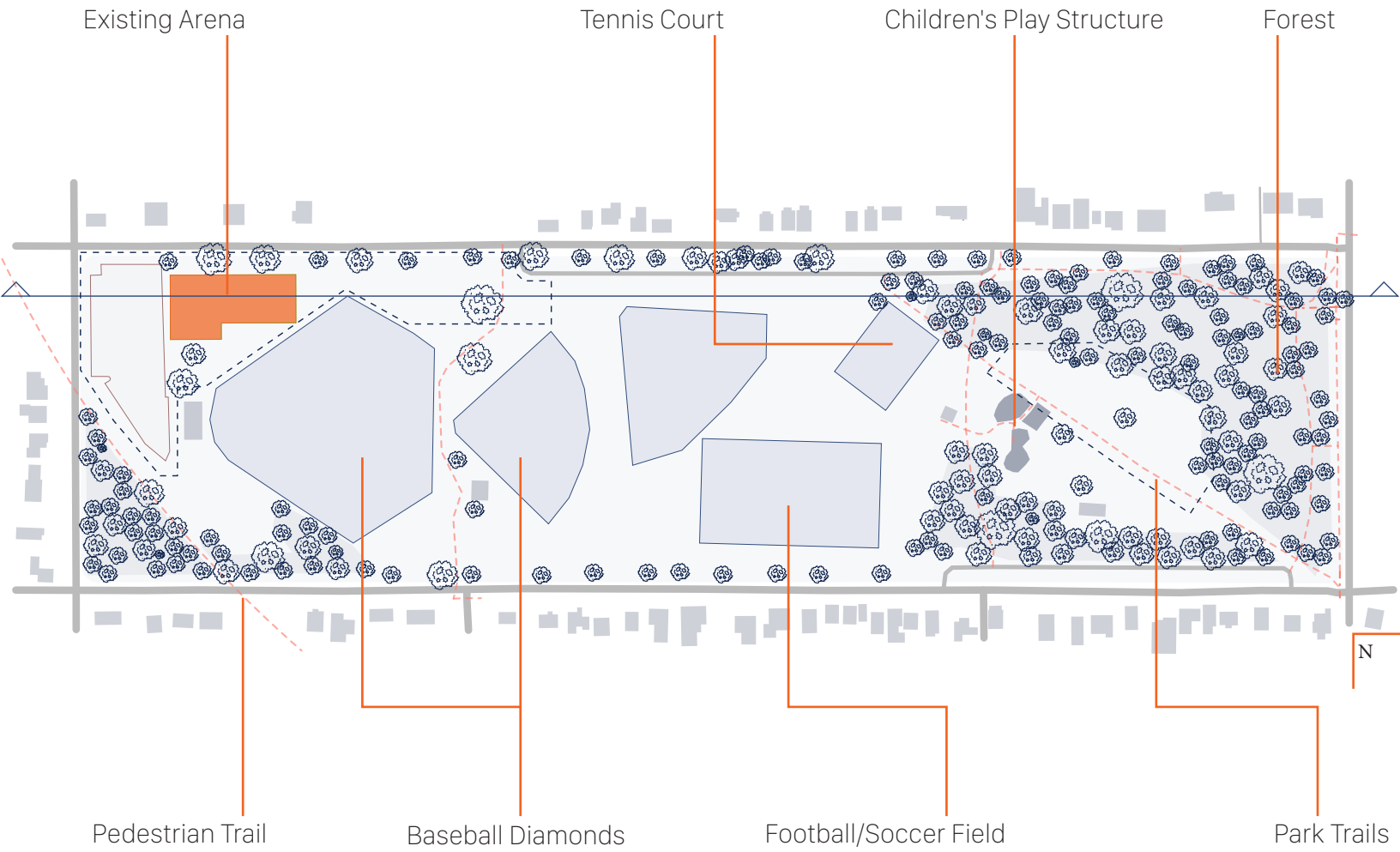


Fig. 79 Exhibition Park, Guelph, Ontario.

The Proposal

This project looks to create a stronger connection between the existing skating rink in Exhibition Park, and the surrounding community. Going back to the research question “how can social and communal collaboration be promoted from the adaptive re-use of an old community skating rink?” It is through design solutions that prioritize the park over the parking lot, to create physical and visual connections to the park, the park’s surroundings and its history, and finally, respect the surrounding historic neighbourhood’s scale. Including transparent facades, and interior spaces, the users can engage in ongoing classes and activities within the building. Having adaptable and versatile community classroom and workshop spaces grants the community to use the space for their large assortment of events and classes, as well as sporting banquets and larger gatherings. Walkable connections from the interior corridors, to important exterior paths and links to the surrounding park and Exhibition Park neighbourhood.

Fig. 80
Exhibition Park existing site plan.



The site for this adaptive reuse project is Exhibition Park, and more specifically the northern end of the park which houses the existing skating rink (see Figure 80). The site was chosen for its primary value to the surrounding community, while maintaining enough green space and sports courts for the community to continue to engage with the park. This park acts as a center ground for a populated urban environment which already features natural aspects, existing sports grounds, open spaces, and the existing rink, which is the basis of this project. Though the adaptive reuse will manipulate the existing arena, there is potential for the selected program to reach past the site boundaries and speak to the park as a whole element, to create programs that interact with the park entirely.

Exhibition park currently has an assortment of physical activities, including baseball diamonds, a football field, tennis courts, walking trails, a playground, and a community rink, within the 33 acre area. Given the park's location from the downtown core of Guelph, and its relationship to the CNR Spurline Trail, which runs through the north end of the site, it is a popular spot for pedestrians to socialize and enjoy.



Fig. 81 Interior render of the community classroom.

The Program

Throughout the year, Exhibition Park hosts multiple events and activities for the local community that are primarily hosted by the local neighborhood group, or city run festivals and events. To begin finding the building's program, a background gathering of all the events, activities, and classes hosted by the neighbourhood as well as the town on exhibition park was collected and sorted, as well as potential future events and goals (see Figure 82). Currently, thriving activities all take place within the park, while the community rents out surrounding auditoriums and rooms for the social events. Throughout the entire park, with each program split into its primary seasonality, around 75% of the programs do not engage or interact with the existing rink, as it is primarily used during the winter for skating. It has potential to act as a social beacon for the community, to host more events all throughout the year, including when it is not being used for skating. The existing skating rink currently has no adequate seating options, or ways of spectating what event

Program	Season(s)	Indoor	Outdoor	Hybrid	Occupants	Area Required	Support Space	Qualitative Aspects
Skating		✓				-200x85' rink -3m hallway -stands	-change rooms -refrigeration room -banquet hall	-indirect natural light -open dynamic space
Speaker Seminar		✓			5-20	-125m ²	-storage	-indirect natural light
Physical Activity				✓	5-20	-125m ² -2.5m ceiling height	-storage	
Social Space				✓	2-50	-small spaces throughout building		-adaptable/natural light
Market Events			✓			-3.5m high clearance -open floor plan	-connection to outside	-natural lighting -connection to park
Educational Camps				✓	5-25	-125m ²	-connection to outside	-natural light
Picnic in the Park / Food Truck Events			✓				-connection to outside -waste disposal	-direct natural light
Community Jam Sesh's				✓		-25m ²		-adaptable lighting -intimate space -sound performing space
Youth Activity Club		✓			1-5	-125m ²	-connection to outside	-natural light
Local Art Competition / Expo				✓		-large exposition space or small intimate spaces		-adaptable lighting -walking space
Swimming		✓					-change rooms -mechanical room	-direct natural light
Field Sports			✓			-92'x49' court -3m perimeter	-change rooms -storage	-direct natural light -open dynamic space -natural ventilation
Community Garden			✓				-shed/storage	-natural light -space to grow
Heritage / Event Celebrations				✓			-storage -connection to outside	-adaptable lighting -open dynamic space
Youth Lounge		✓			1-20	-125m ²	-storage -washrooms	-intimate space -adaptable lighting
Concert in the Park			✓				-stage	-open dynamic space -adaptable lighting
Community Classes		✓			1-15	-125m ²	-storage	-natural light -point facing orientation

- Spring
- Summer
- Fall
- Winter

Fig. 82
Existing programs and events held at Exhibition Park.

is happening on the ice. There is potential for the adaptive reuse aspects to reach out and speak to the other seasons, which creates a more versatile and adaptable building, to serve the community's current and future benefits, as opposed to staying as an outdated building that sits dormant during the summer, in the corner of the park.

Each program was then added to an event matrix, with following quantitative and qualitative features each program has/needs. The matrix parameters include; season of use,

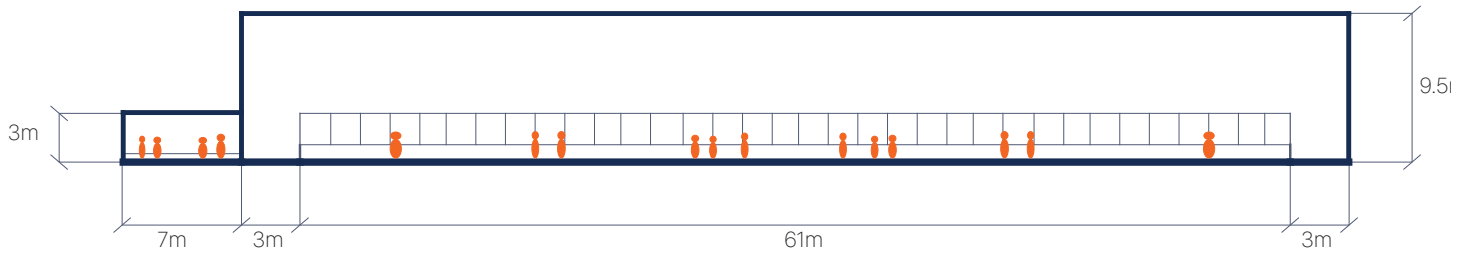
whether it is an indoor outdoor or hybrid program, the estimated number of participants, the rough area required for the space, if it requires any support or adjacent spaces and rooms, and finally, any qualitative aspects that the space may require to be successful (see Figure 82). Looking at the array of programs, similarities were found between related programs, with matching spacial requirements were subdivided into the final building program (See figure 83). The final list includes; a skating rink, multi-purpose adaptable spaces, community classrooms with workshops, social spaces, exercise areas, an indoor sports court, a student centre, and an outdoor amphitheater. Each program was selected based on its ability to adapt into a new and versatile space, while also responding to the current events and activities held within the neighbourhood. The program also maintains the ability for the public to practice Canadian traditions of skating, and playing ice sports.

Fig. 83
Final program chart.

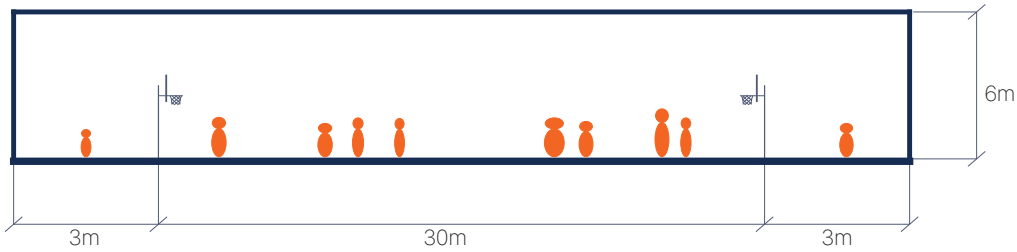
Program	Season(s)	Indoor	Outdoor	Hybrid	Occupants	Area Required	Support Space	Qualitative Aspects
Skating Surface	☄			✓	~	-200'x85' rink -3m hallway -stands	-change rooms -refrigeration room -banquet hall	-indirect natural light -open dynamic space
Multipurpose Room	☀ ☁ ☄	✓			~	-135m ²	-storage -clean work space	-indirect natural light
Maker's Space	☀ ☁ ☄	✓			5-25	-150m ²	-storage -clean work space	
Social Space	☀ ☁ ☄			✓	~	-small spaces throughout building		-adaptable/natural light -variable in size for different scales of group meetings
Workshop - Community Class	☀ ☁ ☄			✓	5-25	-3.5m height clearance -open floor plan	-connection to outside for back of house access	-natural lighting -connection to park
Community Classroom	☀ ☁ ☄			✓	5-25	-150m ²	-connection to outside	-natural light
Exercise Room	☀ ☁ ☄			✓	~	-200m ²	-connection to outside	-direct natural light
Student Center and Studio	☀ ☁ ☄	✓		✓		-130m ²	-visual connection to school	-direct natural light
Indoor Sports Court	☀ ☁ ☄	✓			~	-about 500m ²	-connection to outside	-adaptable lighting
Outdoor Sports Court	☀ ☁ ☄		✓		1-5			
Reading Garden	☀ ☁ ☄		✓		~		-some sheltered spaces	-frequent natural light -walking space
Amphitheater	☀ ☁ ☄		✓		~	-larger open space	-seating	-outward projecting space
Outdoor Exercise Space	☀ ☁ ☄		✓		~			
Market Space	☀ ☁ ☄			✓	~		-connection to road	-natural light -space to grow

From the program matrix, secondary analysis was done to find for each space, and how it would look in section, to define the quantitative aspects of each space, and its potential for connection to the surrounding park (see Figure 84). The analysis includes height requirements, and how the scale of each space can help improve its social ability, creating a more communal environment. Community classrooms and workshops were included in the program list to promote activity engagement and teaching sessions for the community, and speak to the current class events held in the local schools gymnasium. Exercise spaces and indoor sports courts allow the active community to engage in physical activity, which is a theme throughout the entire park with the sports courts. A small student centre was added as an after school program option for students across the street at Victoria Public School. There are a number of school/student related programs created by the city that support younger students in this community, and a specific place for after school activities provides a stronger social engagement with community based events. The rink was maintained as part of the adaptive reuse strategy to still allow the users to celebrate Canadian traditions in skating. With the rink still being a popular location for skating and hockey, adapting the rink for better viewing allows for the continuation of skating, as well as more versatile programs during the summer, strengthening the seasonality of the building. Finally an exterior amphitheater will allow for social events and concerts, which are consistently being hosted in Exhibition Park throughout the year.

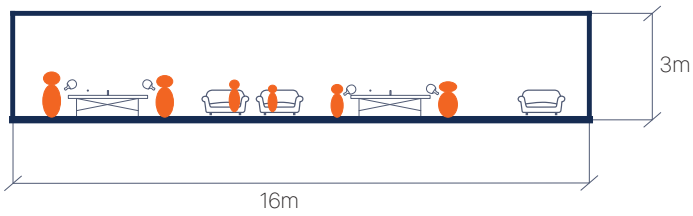
Skating Rink



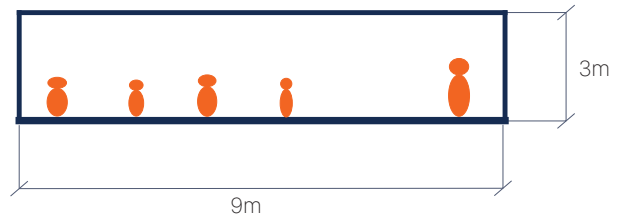
Indoor Sports Court



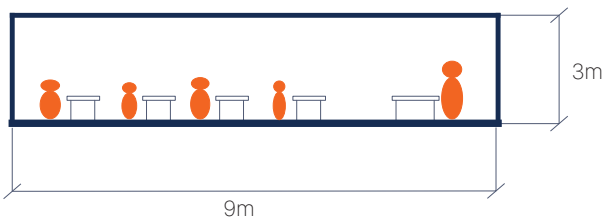
Youth/Student Lounge



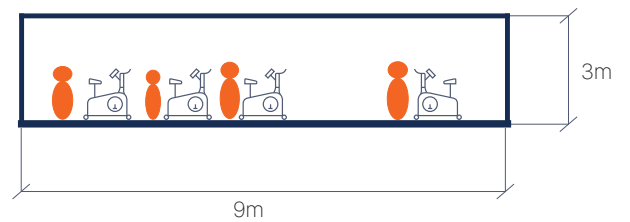
Multipurpose Room



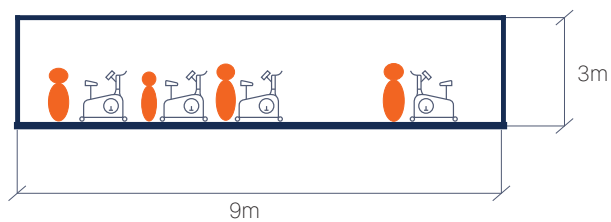
Community Classroom



Exercise Room



Exercise Room



Workshop

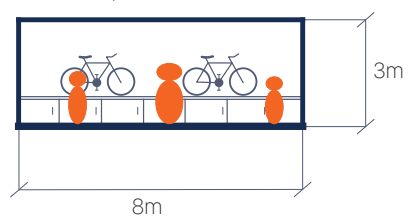


Fig. 84
Spatial requirements of selected programs, in section.



Fig. 85 Amphitheater Perspective From Secondary Corridor

Layout

Though there are some interventions throughout the park, the primary architectural intervention this project proposed is on the northern corner of Exhibition Park, where the existing rink is held. With the growth of the park, shown through its history and how it's adapted through the years, a decision to relocate one of the existing baseball diamonds for the proposed building to have maximum potential to connect, and reach the rest of the park. As part of the proposal, one of the other baseball diamonds has been turned into a soccer field. This allows for a more open space that can be used as open grass fields when games are not happening. This results in a more versatile space for users to engage in a greater amount of activities in that particular space.

Fig. 86
Map of important surrounding
connection points.

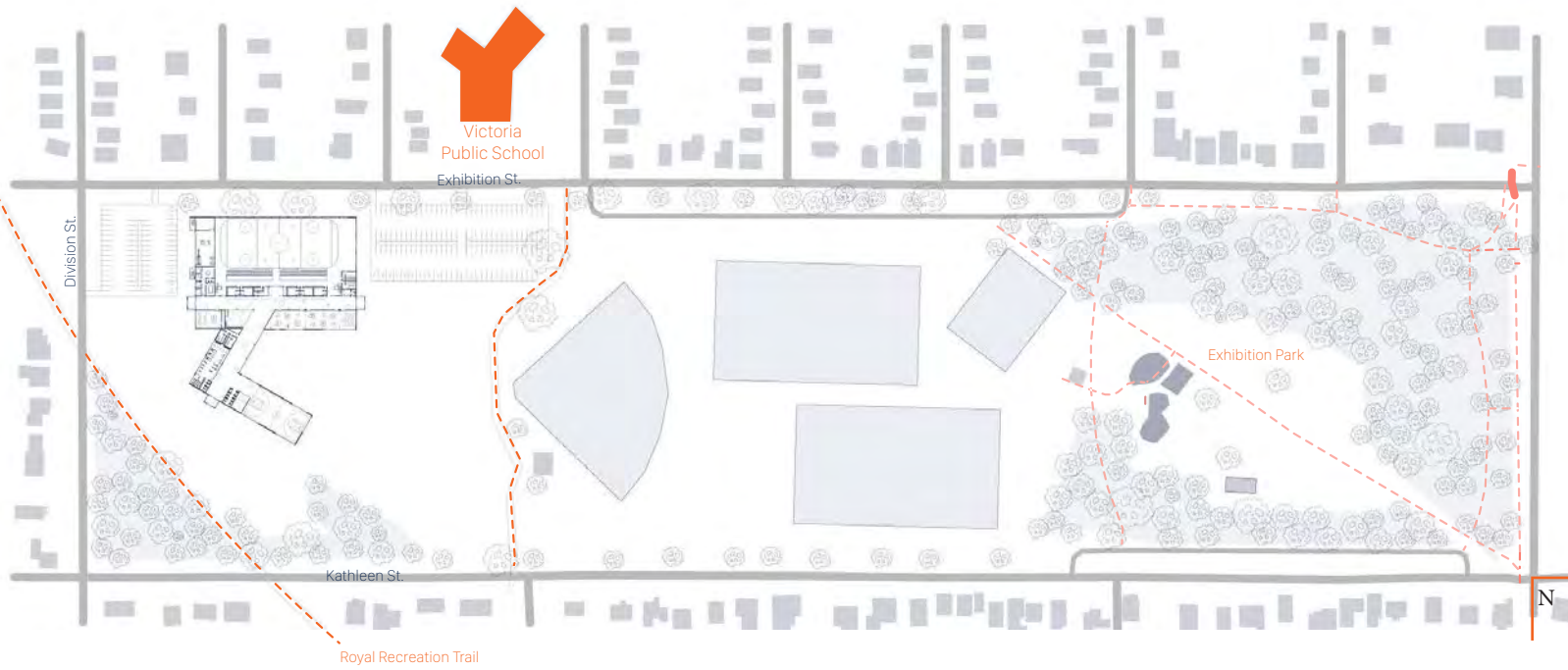
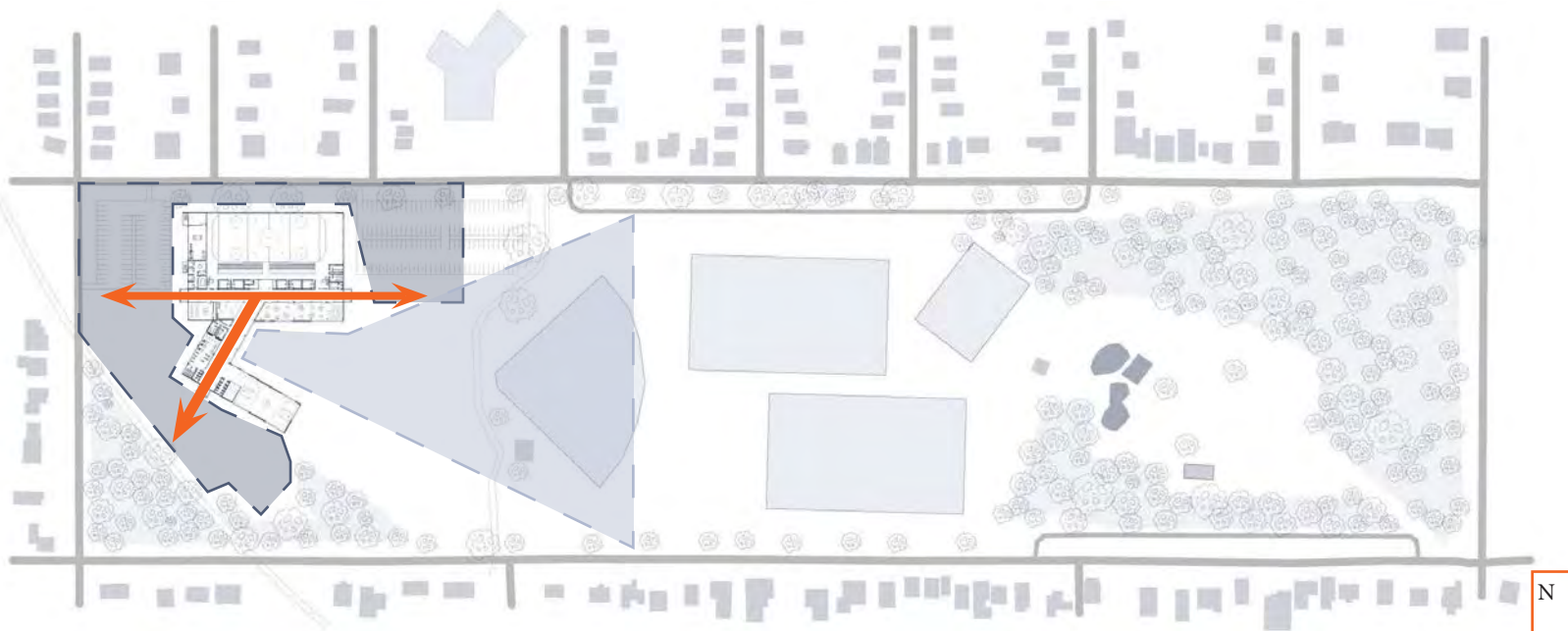


Fig. 87
Site Plan showing primary corridors
connecting to surrounding
connection points.



The first goal of the building orientation was to emphasize specific connections and maintain pathways to certain existing neighbourhood features, including Victoria Public School, the CNR Spurline Trail, and the rest of the park itself (see Figure 86). Considering the current location of the rink, as well as the parking lot, two major corridors, which are defined as 'social streets' connect the north and south ends of the site, adding a connection to the public school to the east of the existing building (see Figure 87). The secondary corridor stretches towards the pedestrian trail to the west from the center point of the social street. To help respect the scale of this historic neighbourhood, additions to the building do not reach the sidewalk, and allow the building to become more embedded within the park's landscape. As part of the proposal, some of the existing parking was replaced with grass and a walking path which connects the entrances of the community centre with the surrounding sidewalks. The sidewalks reaching out to the primary corridor directly respond with exterior pathways and sidewalks, instead of parking. This allows for a stronger relationship between the building, and the mass of pedestrians walking or bicycling around the site, and promotes users to engage with the building, as opposed to the commuters driving to the community centre, and not taking advantage of the variety of connections throughout the park.

Fig. 88
Pedestrian site circulation map.

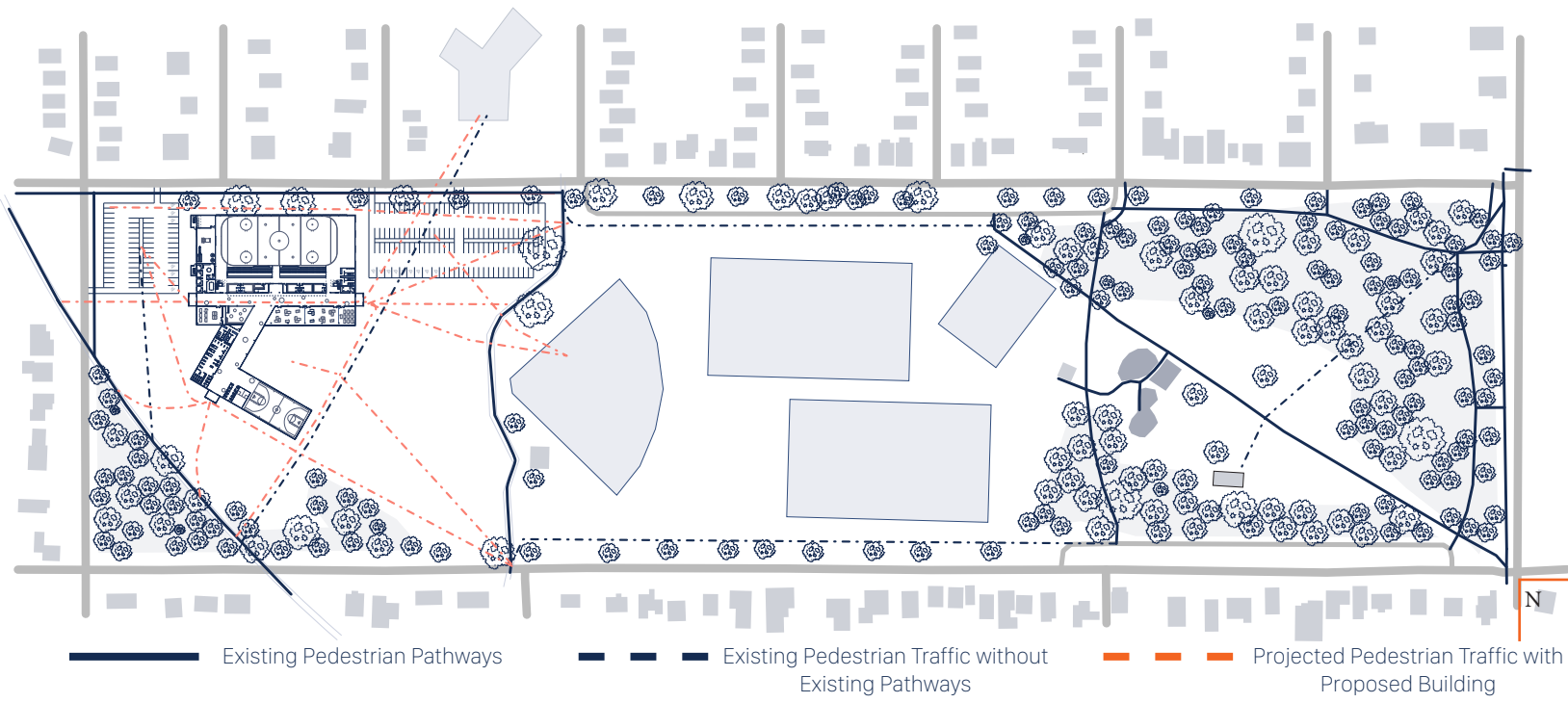
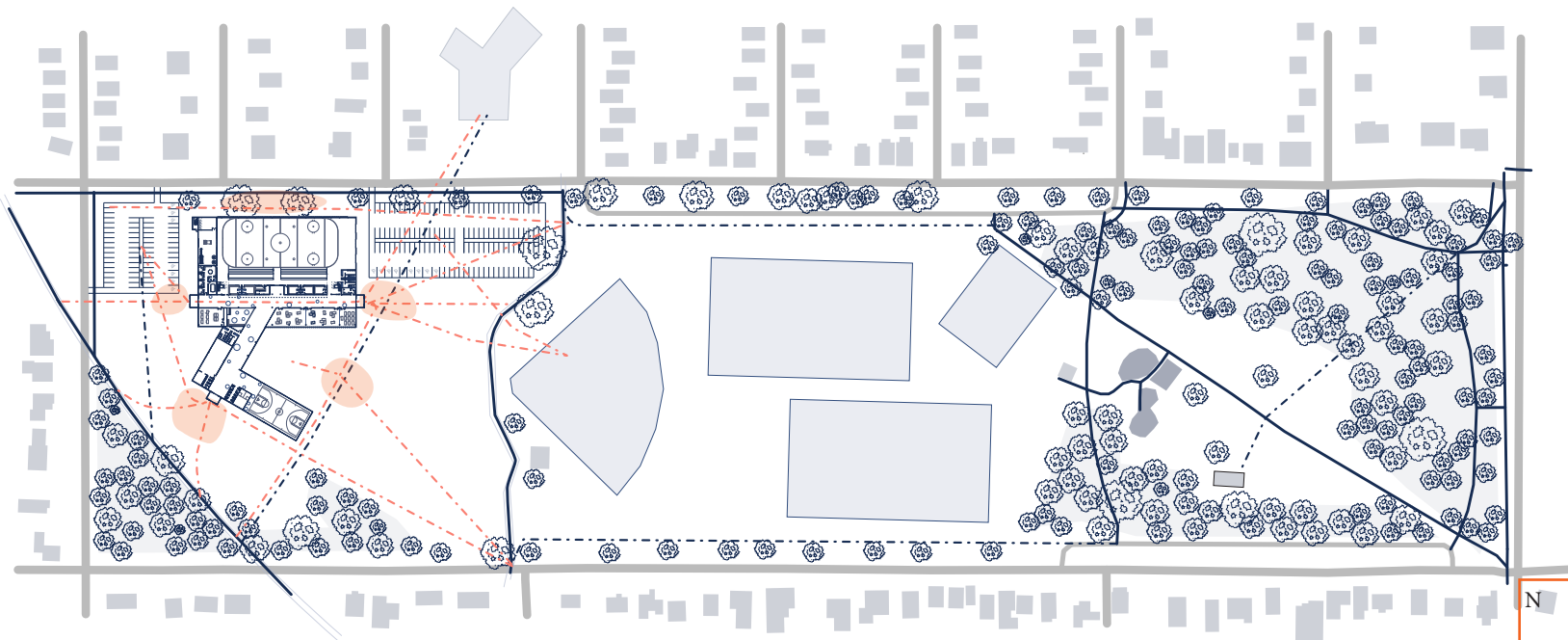


Fig. 89
Pedestrian site circulation map with hot spots.



Highlighted in the legend, an analysis of how users currently engage with the park's paths, as well as how users are able to interact with the proposed building, a pedestrian circulation study derives how users might commute through and around the proposed building, as well as potential social hot spots based on overlapping and crossing exterior pathways. The existing, as well as potential pathways study created the base for where exterior pathways would be most efficient, and allow for social engagement at different points directly surrounding the building (see Figure 88). Each of these paths has a direct response from the surrounding site conditions, including, maintaining pedestrian paths throughout the entire park where there are currently no specific paths for pedestrians, creating direct connections between the northern building face, and the surrounding sidewalks. This allows for engagement between the community and the event/activity going on inside. Finally, pathways throughout the east side of the building connect critical points between an entrance to the building, the CNR Spurline Trail, and circulation to the rest of the park. From the overlaying pedestrian circulation mapping, social hot spots begin to inform potential exterior spaces that can host programs, where they will be the most engaging with the community and neighbourhood (see Figure 89).

Fig. 90
Proposed site plan.

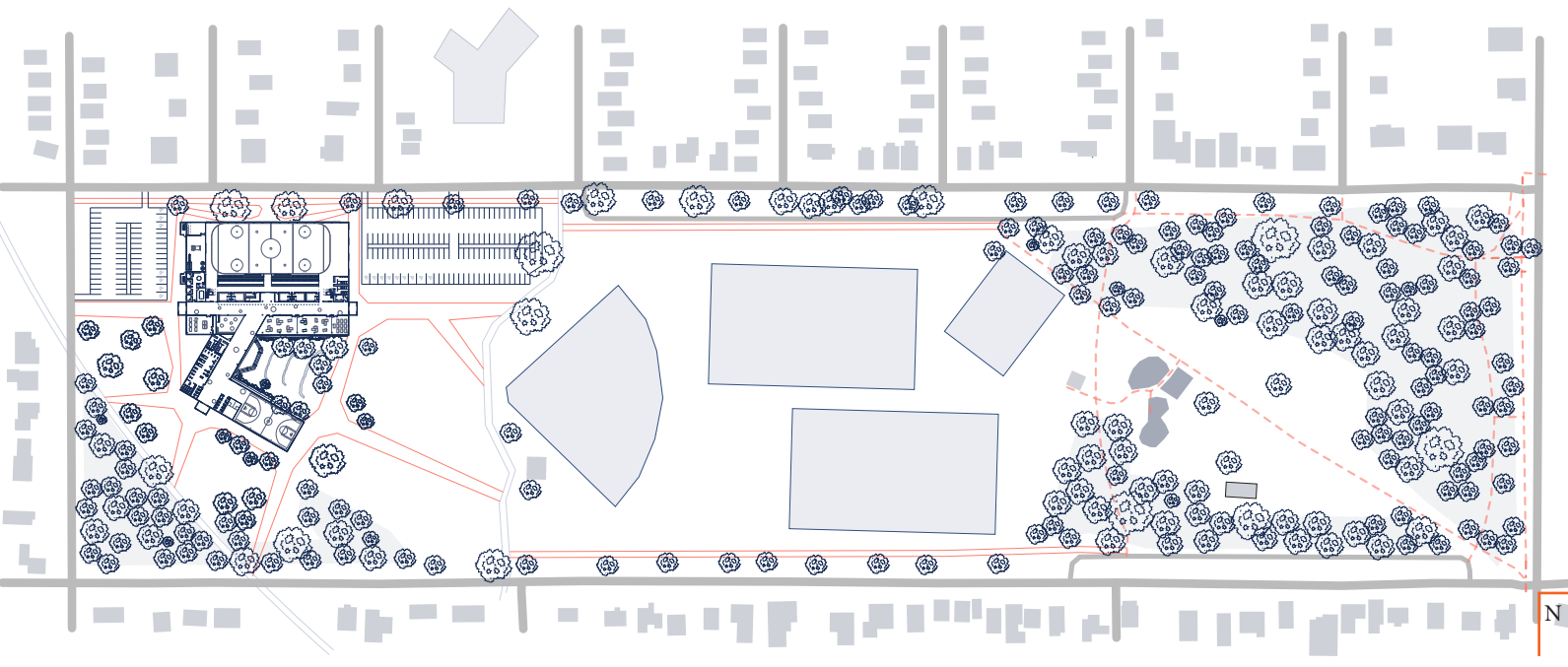
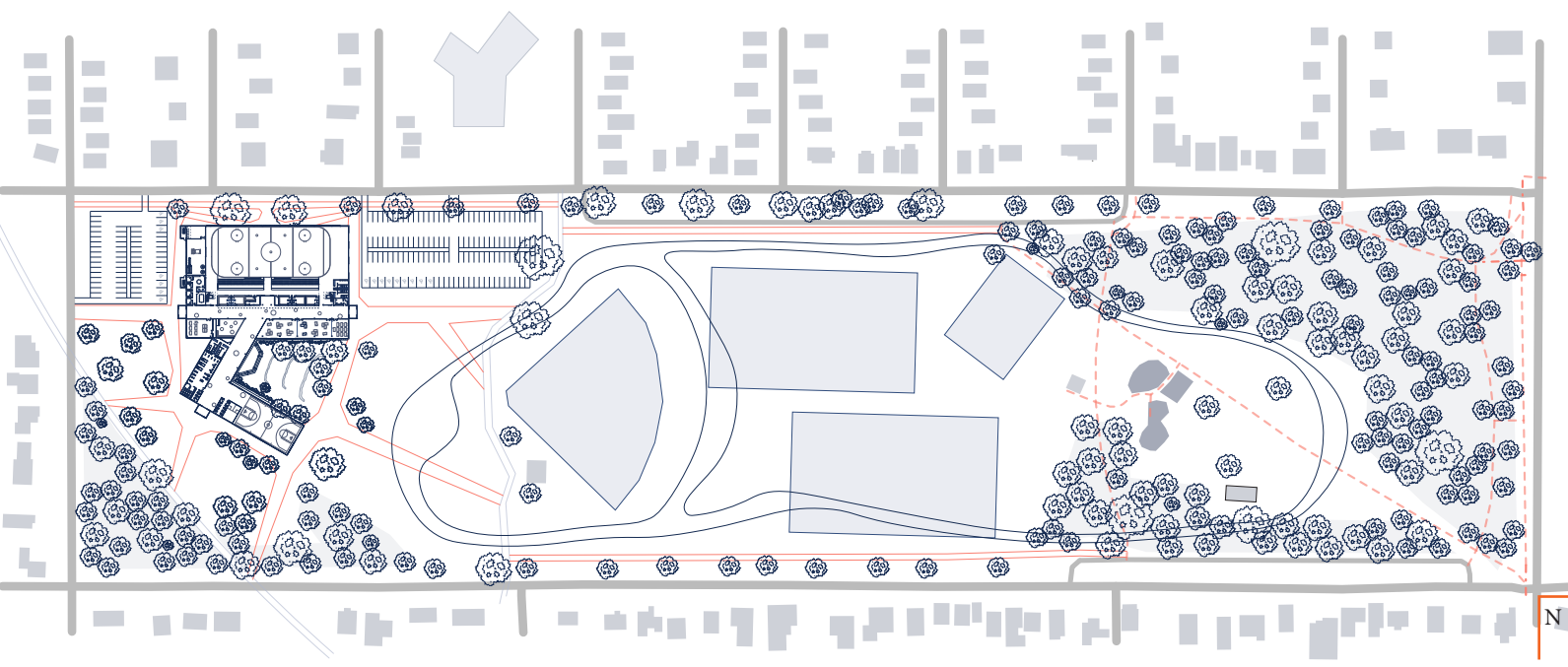


Fig. 91
Proposed site plan with skating path.



The site plan consists of pathways and connections to surrounding critical points (see figure 90). Specific pathways connecting the entrances to sidewalks and trails around the building were introduced to bring users to the building for social engagement. Pathways from the primary corridor's entrances lead directly to paths and sidewalks, as opposed to the entrances opening directly to the parking lot. This helps encourage users passing through the park to engage with the community centre, and seeing the activities and events happening within. Multiple pathways connect the eastern entrance to the CNR Spurline Trail. Since this trail runs around the downtown district, it is a popular trail network for the community. Having efficient pathways leading to the building will allow a larger engagement with the building from a further reach of the direct neighbourhood. Vegetation growing from the small forest along the CNR Spurline Trail allows for passive strategies to create a more efficient building energy consumption, and also promotes the concept of adaptive re-use, and integrating the park more into the building. Trees also allow shaded sports for the summer for users to enjoy the exterior spaces when there are no events happening. A proposed skating path that runs around the park also speaks to the seasonality of the park. In the summer, a water feature directs views towards the rest of the park. In the winter, the water feature is frozen as part of the skating path. For different levels of skating, there is a small pad that offers users to skate in a local ground for quick skates. There is also potential for longer skating paths that wrap around the rest of the park, and weave through the forest on the south end of the park, creating a unique experience for the community (see Figure 91).

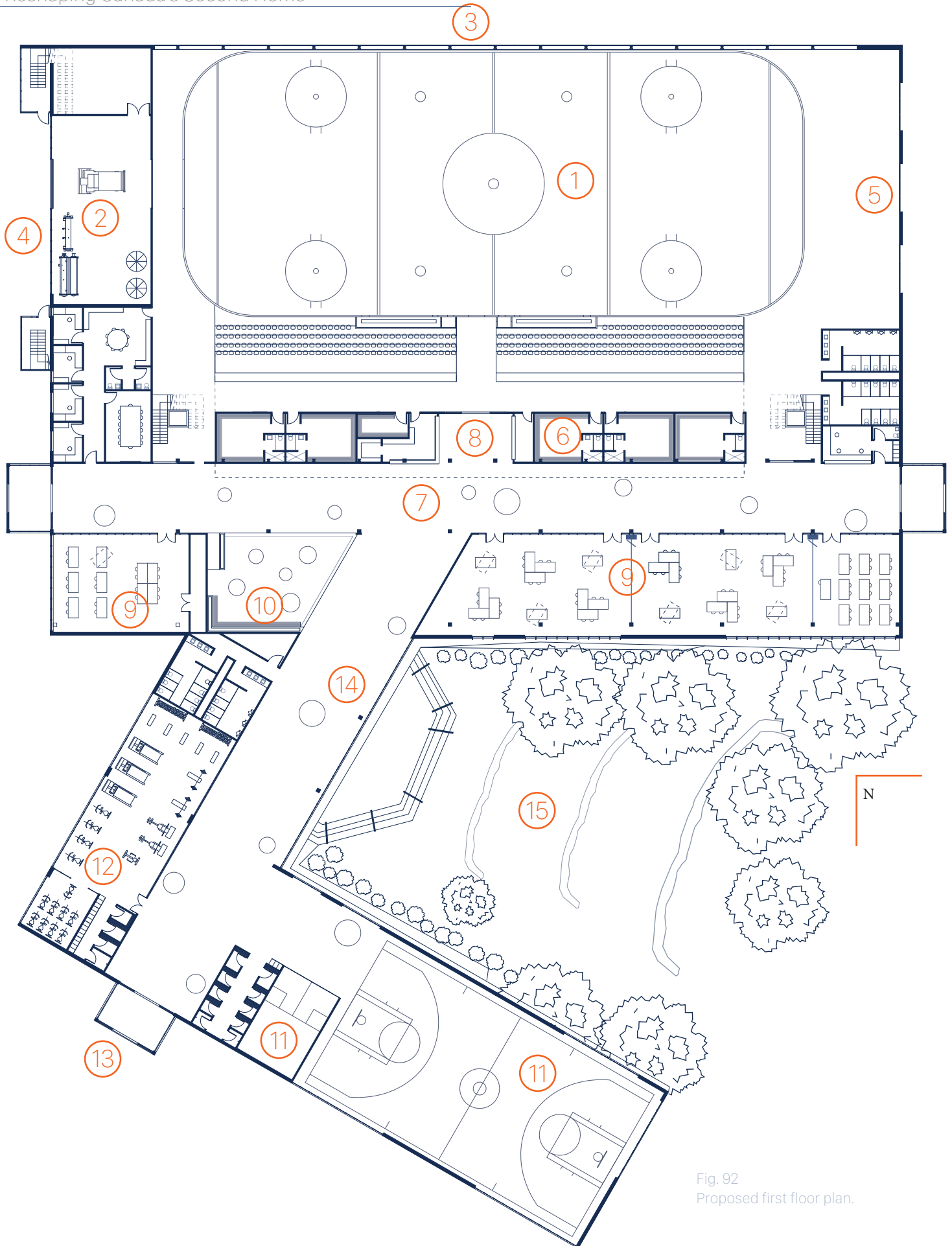


Fig. 92
Proposed first floor plan.

Beginning with the rink, it was kept in the same spot to preserve the adaptive reuse strategy (see Figure 92). It is located parallel to Exhibition Street. Removing the interior existing change room walls, the rink surface was able to expand to a typical rink size of 200 ft long (1). To one side of the rink surface, there is the mechanical room, the ice resurfacer room along with the cooling equipment, and the back of house staff space with offices, a meeting room, and a general work space (2). The northern facade has translucent glazing along the ends of the wall, and transparent glazing in the centre. This creates a more interesting reveal moment at centre ice, for pedestrians walking by can have a glimpse of what is happening inside (3). Storefront glazing was also added to the exterior wall of the ice resurfacer room to allow pedestrians to get an inside look at what happens in the back of house of an arena, while also showcasing the ice resurfacer itself as part of the Canadian heritage theme of skating (4). On the opposite side of the rink, there is an open space with garage doors to the exterior. This space can be used for sports teams to warm up, or, the garage doors can open to the parking lot to create an interactive indoor/outdoor market where vendors can move stalls inside, and have a fluid transition from inside to outside (5). Change rooms are located through the tunnels under the viewing stands (6).

Moving into the primary circulation space, an interior social street allows for a walking connection to not only the exterior critical points, but also to the different programs held around the building that connect to the corridors (7). On the rink side of the primary corridor is the concession area, and pro shop (8). On the opposite side, there are community classrooms, multi-purpose rooms, workshops, and social spaces for the community to engage and learn new skills, taught by other community members (9). There is a large open space, with a glazing on the south, that can divide into smaller spaces. If larger events such as celebrations and banquets are held, the room can be one large space to account for everyone. When community classes and workshops are being held, the space can be divided with temporary walls to create smaller, more intimate spaces. There is also a dropped social space where people can wait and engage (10).

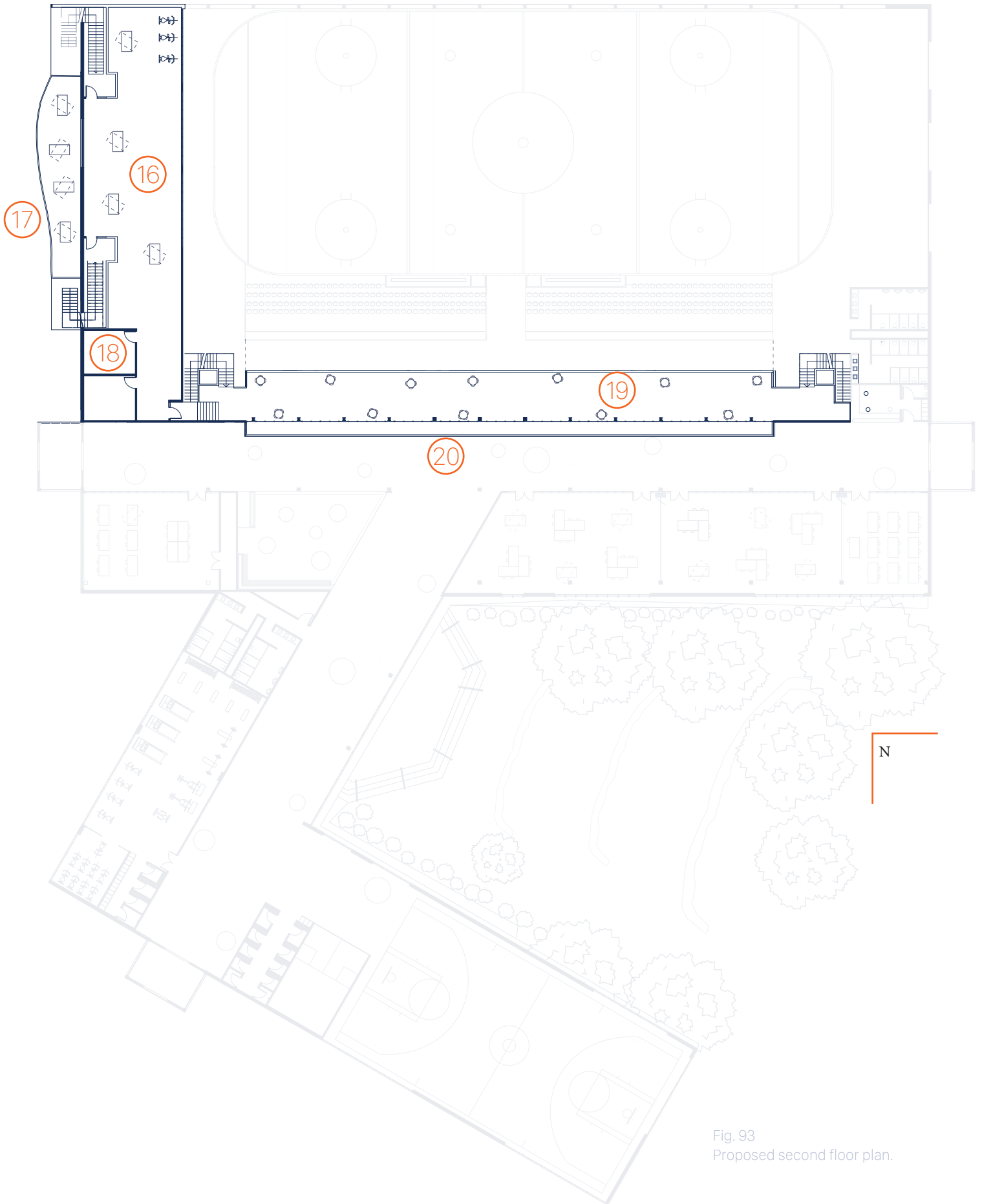


Fig. 93
Proposed second floor plan.

Coming from the east entrance, there's an indoor basketball court and sports court as well as squash courts for the public (11). On the opposite side of the courts, is an exercise space, with a space for classes as well (12). Since this entrance connects directly from the CNR Spurline Trail, pedestrians can access the exercise and physical activity spaces directly (13). In the centre of the corridor coming from the east entrance, there is circular seating around for the community to socialize in between classes or activities(14).

In the centre of the building on the outside is an lowered amphitheater (15). The theater projects outward towards the rest of the park, opening up for people to interact. The lowering of the theater mimics the natural topography of the south end of the park. The walls around the lowering bowl also mimic cut lines and excavations in the local quarries. These cutaways provide additional seating around the stage, with the retaining rock plateaus in the center.

On the second floor, the student center overlooks the northern corner adjacent to the skating rink (see Figure 93). This space can be accessed from outside or from the seating area of the rink (16). There is a balcony that sticks out from the student space for students to look out into their neighbourhood, and see what is happening outside (17). There are also windows to the rink so they can continue to watch and engage in activities happening on the rink. Finally, there are two small rooms with soundproofing to create a jam sesh room for instruments, for the students (18).

There is also a walkway along the top row of seating with tables for people to sit, overlooking the rink (19). Connecting to the walkway, is an opening to a balcony that overlooks the main corridor, or social street. This creates more transparencies throughout the building to allow for strong visual and direct connections (20).

The idea of transforming an existing heritage building into a community centre through adaptive reuse speaks to the issue of the number of community rinks that are past their lifespan, and need more efficient programs for them to thrive. There is a sentimental connection from the existing rink and its significance to Canadian culture through skating, that the community reflects from this building, so instead of removing it and losing its community beacon, adapting it into something that has a greater service to the community.

The existing arena is a completely block wall with no windows on the first floor. As part of the adaptive reuse, orange represents the change into the proposed building (see Figure 94). Openings in the top wall allow for more natural light to enter the space, and bring outside spectators to the building. The interior walls were removed to open up garage doors on either side of the rink, and the expansion of the rink

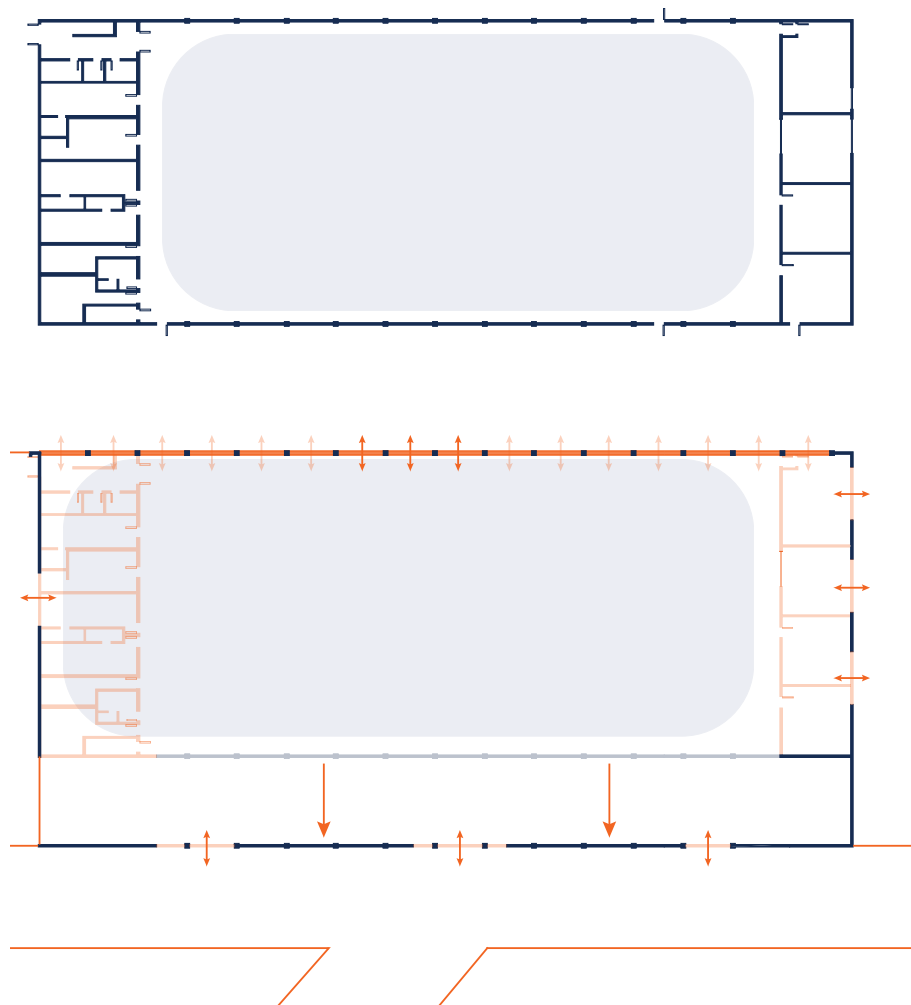


Fig. 94
Proposed adaptive re-use strategies
in plan.

to a standard size. The bottom wall is pushed down to allow space for change rooms and effective viewing stands. Opening in this wall also opens up as tunnels to the rink. This is a connection to the primary corridor. Back of house and mechanical rooms on the left side of the existing building allow room for better systems, and to showcase the ice resurfer to the community passing by.

In section, the exterior topography reaches even to the raised half wall (see Figure 95). Lifting the wall caused the roof to project out and create a welcoming side, users outside can look down into the rink to see activities and events happening. Since the roof span increased, the current existing structure can be recycled in the basketball court building section, as that span matches the existing rink span. The left side also opens up into the primary corridor for passage from the rink to the rest of the community center.

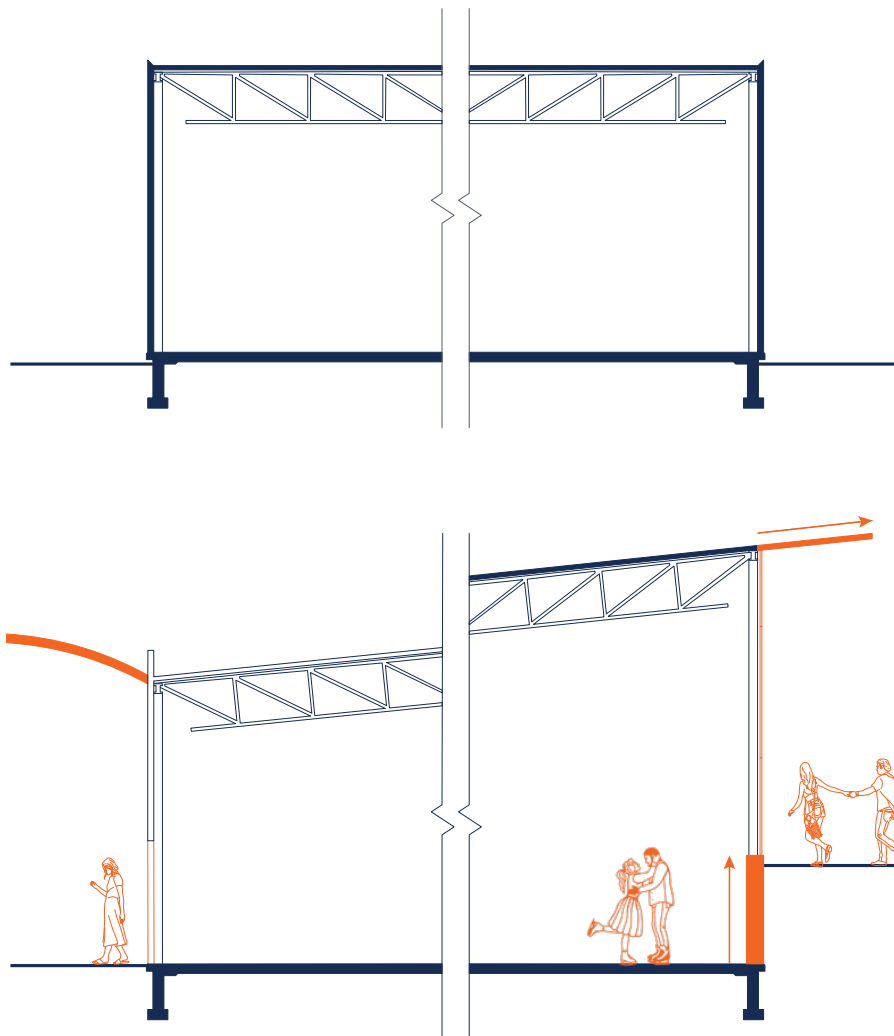
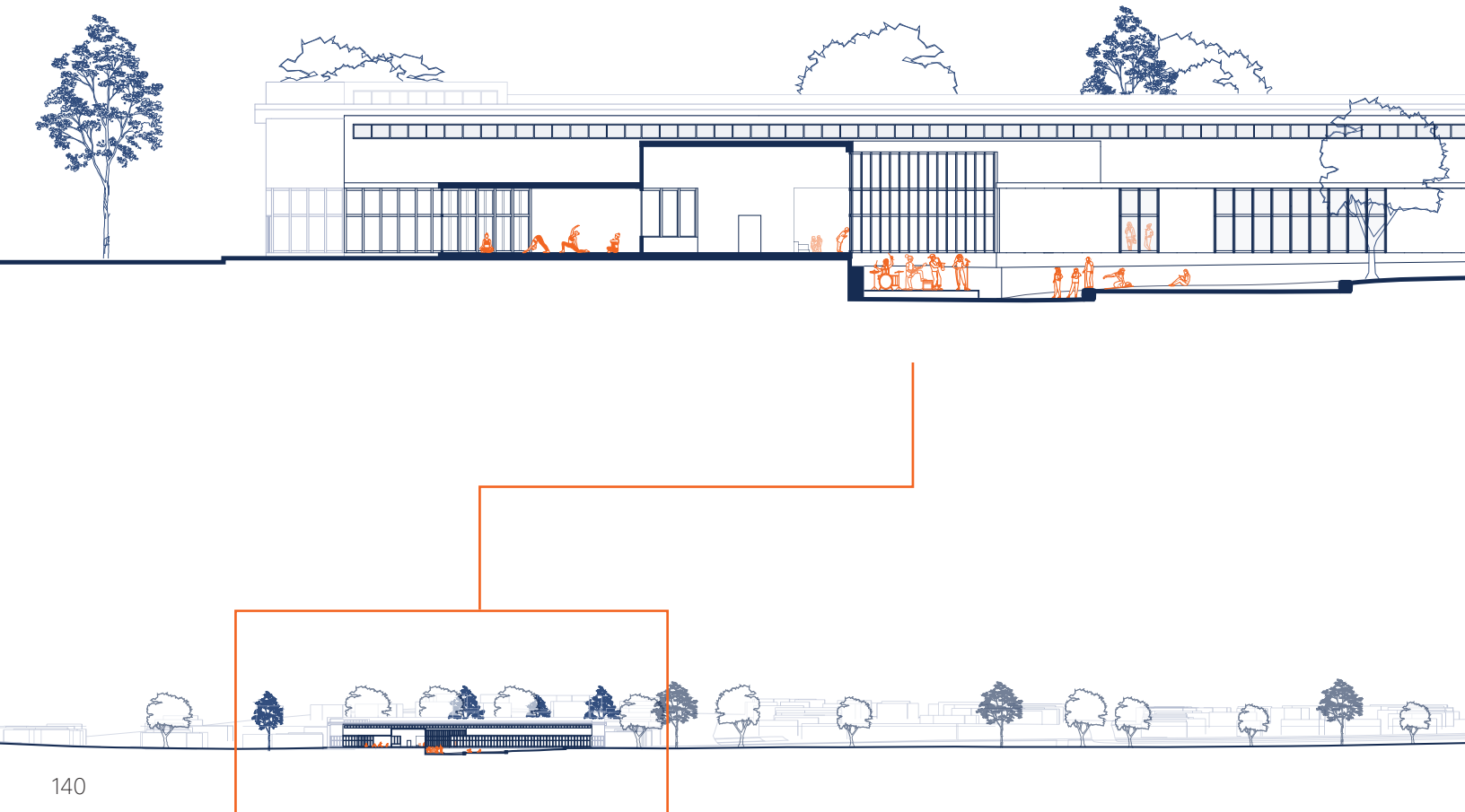


Fig. 95
Proposed adaptive re-use strategies
in section.



Fig. 96
Exterior perspective of amphitheater.



The dropped amphitheater projects out facing the rest of the park. The theater also reflects the natural topography in the south end of Exhibition Park (see Figure 97). Since the park hosts concerts and bands in the park, a stage where the community walking through the exterior pathways can engage with the events, and create a social hot spot for the users (see Figure 96). From the centre of the corridor, the curtain wall allows users to look out to the rest of the park, as well as peek into any activities and events happening on stage. On the other side of the amphitheater is the exercise space where community workout classes can happen. The surrounding wall also projects out at certain points to create additional seating. On either side of the building, the primary corridor jets out of the building to extend to the surroundings. It also is taller than the community classrooms for the clerestory window to allow light to filter in.

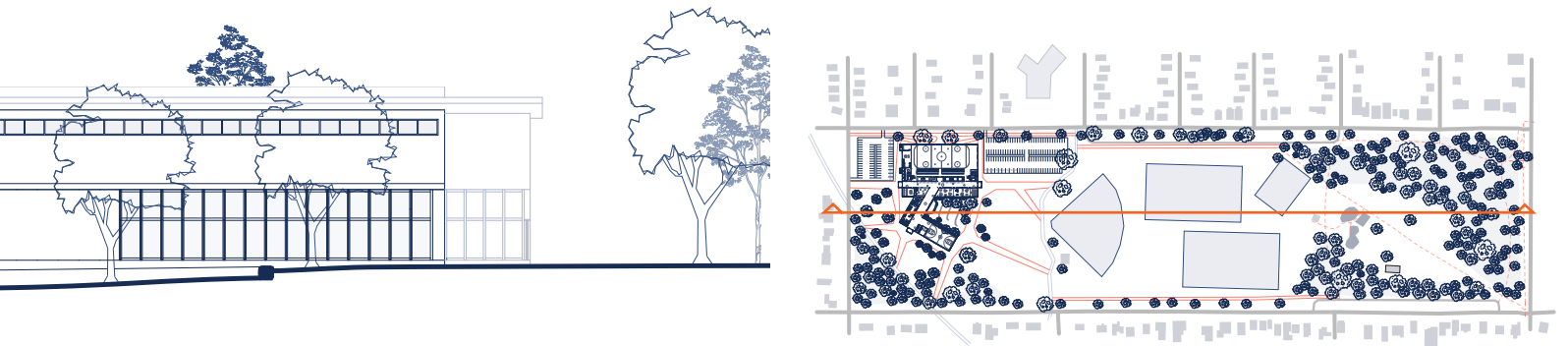


Fig. 97
Site section with callout of
amphitheater space.

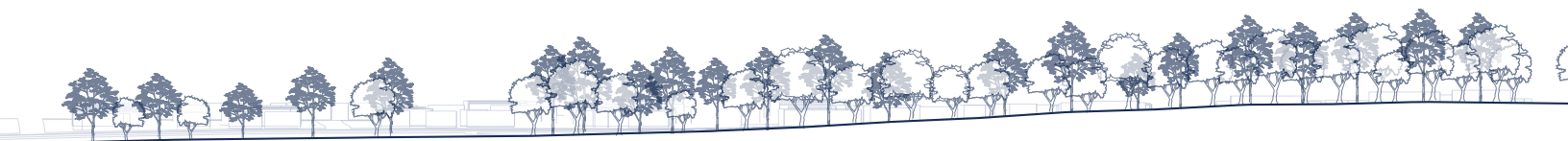
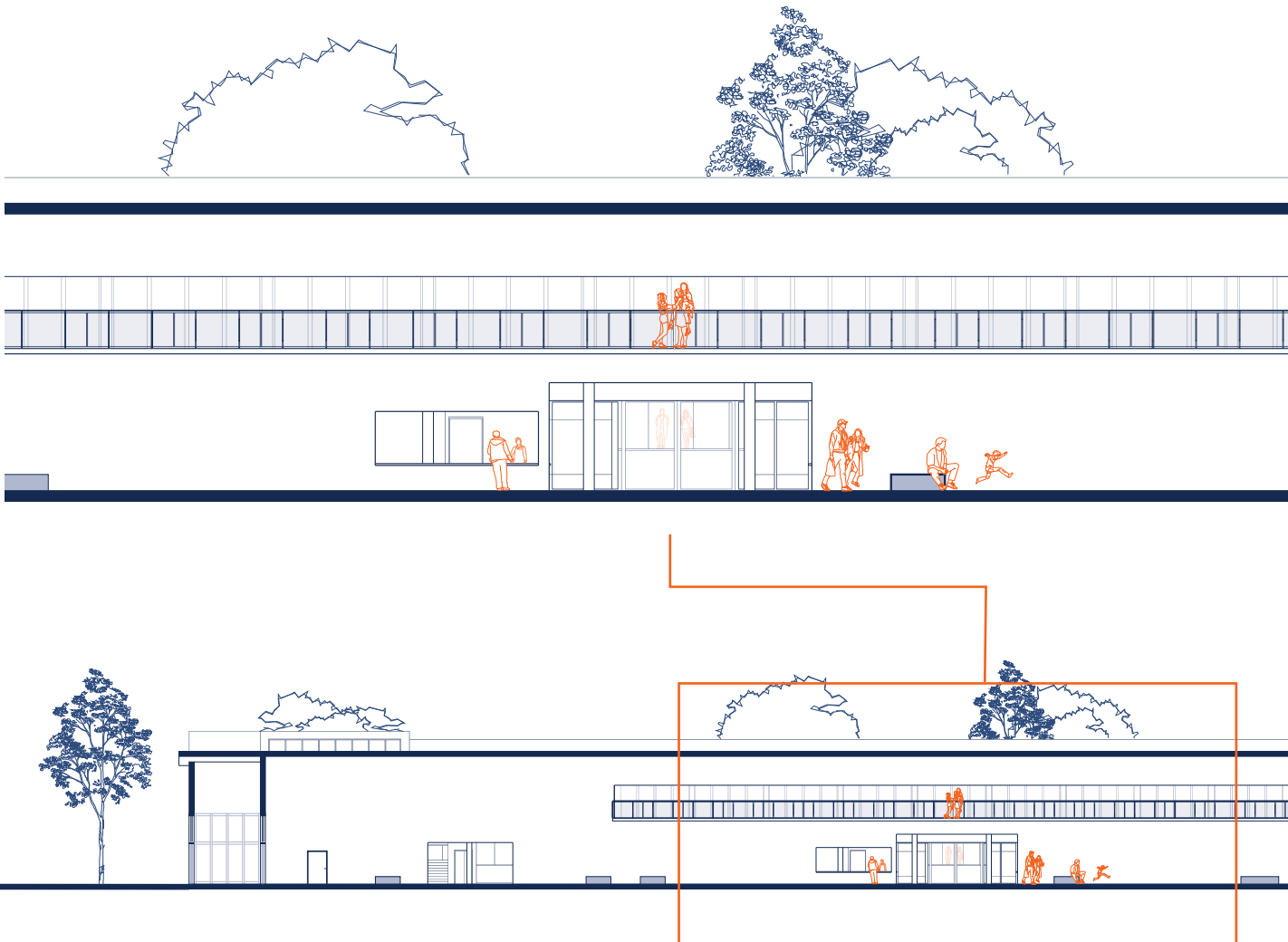




Fig. 98
Interior perspective of social spaces.



The primary corridor connects the north and south axis of the park (see Figure 99). In this social street, there are circular seating throughout the hall for people to sit and talk. There is also a balcony that comes out from the walkway on the second floor. This balcony projects out so users can see everything happening in the social street, while still being able to watch the events in the rink space. On one end of the corridor is the entrance to the staff room, followed by a staircase and elevator to the second floor, as well as access to the rink. In the centre of the corridor is an opening to the rink through a tunnel under the viewing stands. On either side of the tunnel are the concession stand and pro shop. On the opposite end of the corridor is another staircase and elevator to the second floor's walkway, as well as the reception desk, directly across from the community classrooms. Limestone on the exterior and some interior walls speaks to the city's history through the quarry industry, producing limestone used throughout the downtown sector.

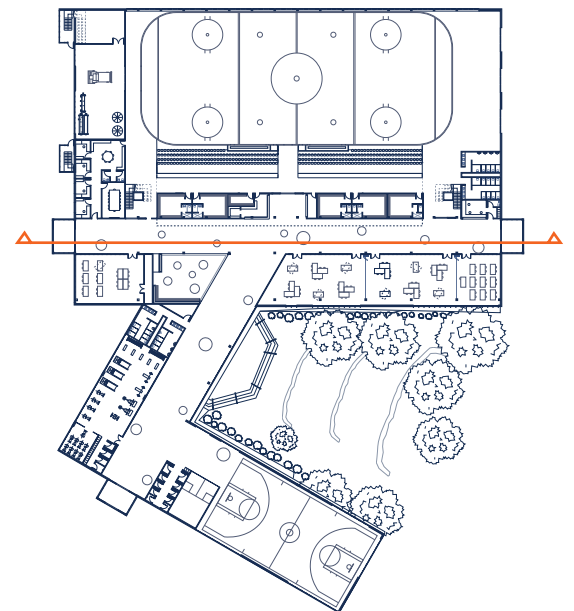
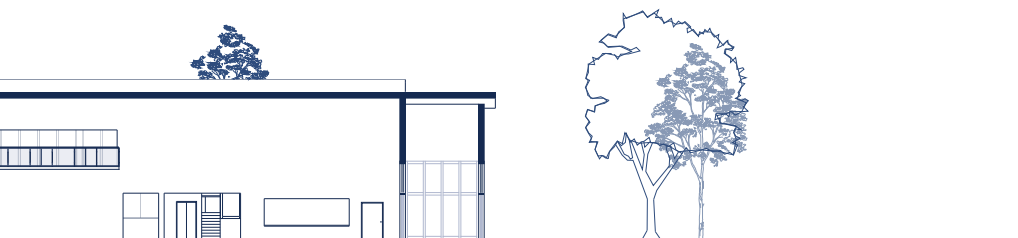
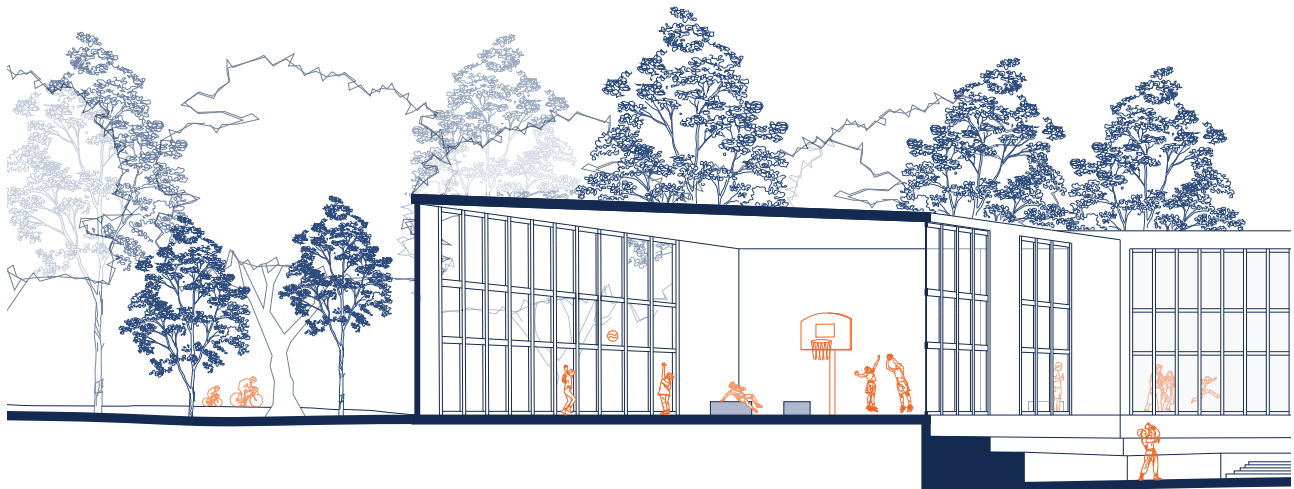


Fig. 99
Section of primary corridor
and callout of possible social
interactions.

With views to the CNR Spurline Trail and forest, the basketball court has direct connections to the surrounding park green spaces (see Figure 100). There are also views down towards the amphitheater for the community to engage in different social activities happening around the park. Transparent glazing allows natural light into the basketball court, while deciduous trees on the exterior passively protect the gym from overheating.

In the primary corridor, there are interior windows into the community classrooms and workshops for the community to peek into events and activities happening in the neighbourhood. The community classes allow the users to teach and learn about different skills and ideas from other community members.



The balcony reaches out from the walkway to look into the primary corridor. The along the balcony wall helps bring natural light deeper into the walkway, but not enough to affect the ice with hot spots. Under the viewing stands is the hallway to the change rooms. On one side are the change rooms, referee room, and on the other side carved into the stands is a bench for the community to potentially tie skates for public skates and the winter pathway through the park.

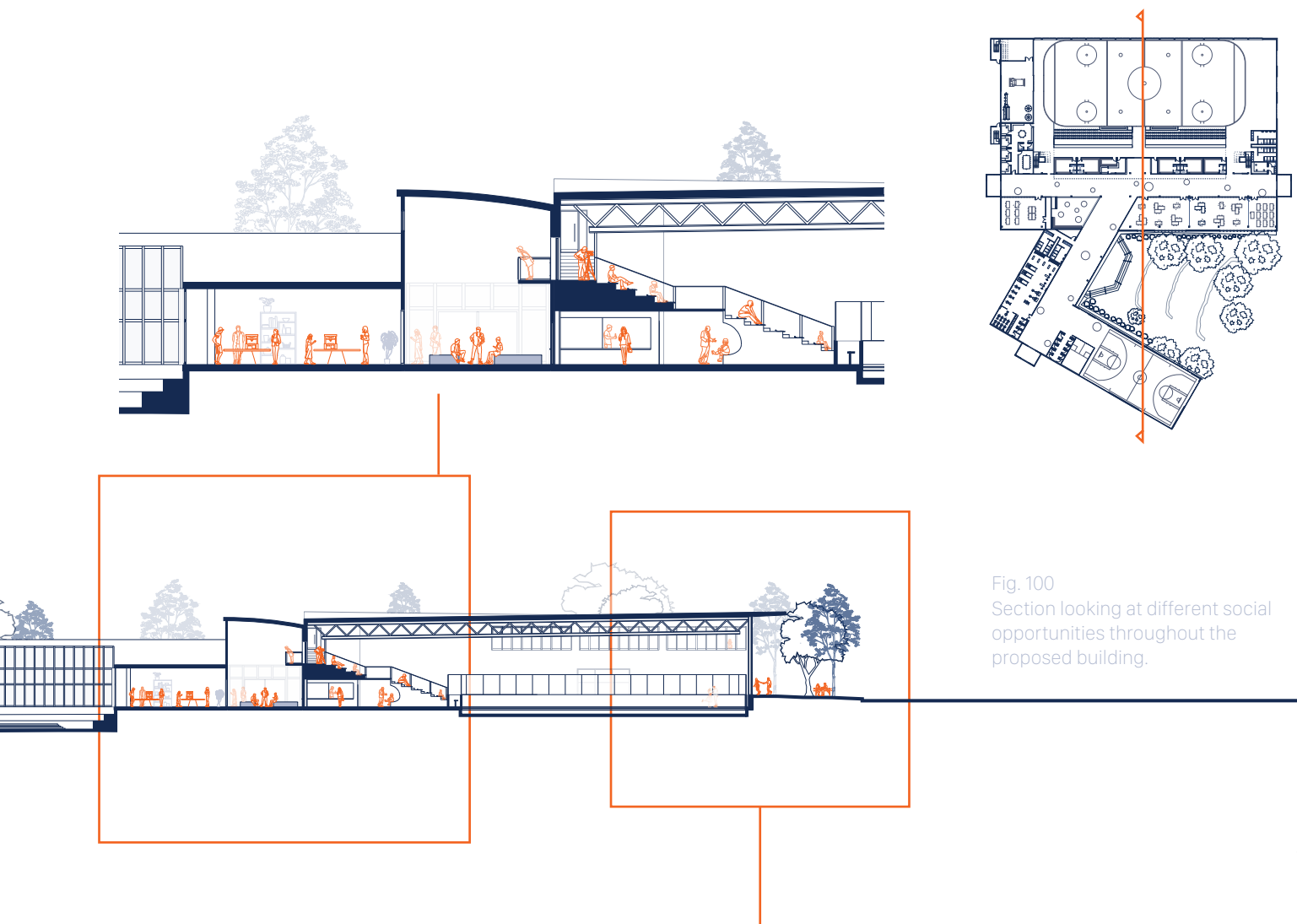


Fig. 100
Section looking at different social opportunities throughout the proposed building.

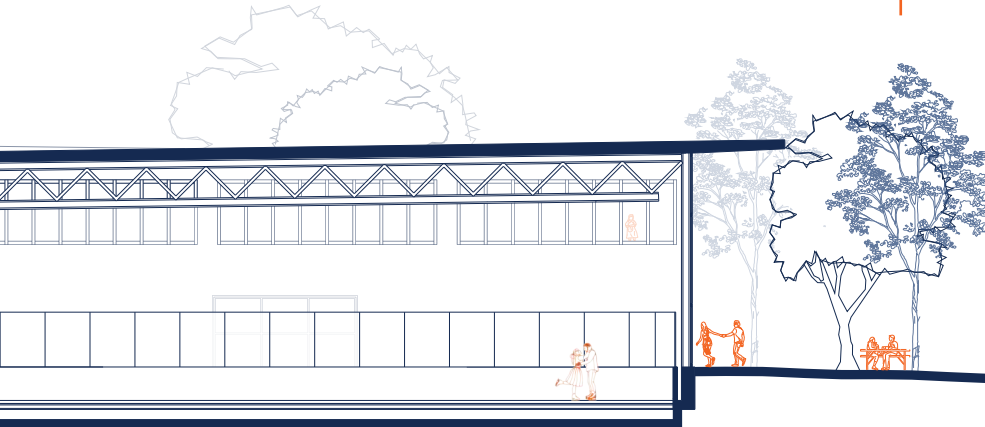


Fig. 101
Section on north facade looking at connection from the exterior to the interior rink.

On the rink's facade facing the street, the entire wall has translucent and transparent glazing. On the exterior side, pathways lead up to the center ice of the rink for pedestrians walking by to engage with the events and activities on the ice (see Figure 103). Either side of the glazing is translucent glazing to diffuse light to enter the rink, while protecting the ice from melting (see Figure 102). The roof angle opens up to the community, inviting the community to engage with the community centre (see Figure 101), opposite to its existing face with no openings. Along the translucent glazing are slivers of reveals to the rink as it builds up to the center. On the transparent glazing is the inverse, covering a pattern onto the glazing. The slivers mimic the smooth carving of ice when skating, mirroring what is happening on the rink's ice (see Figure 103).

Fig. 102
Interior elevation of translucent and transparent curtain wall.

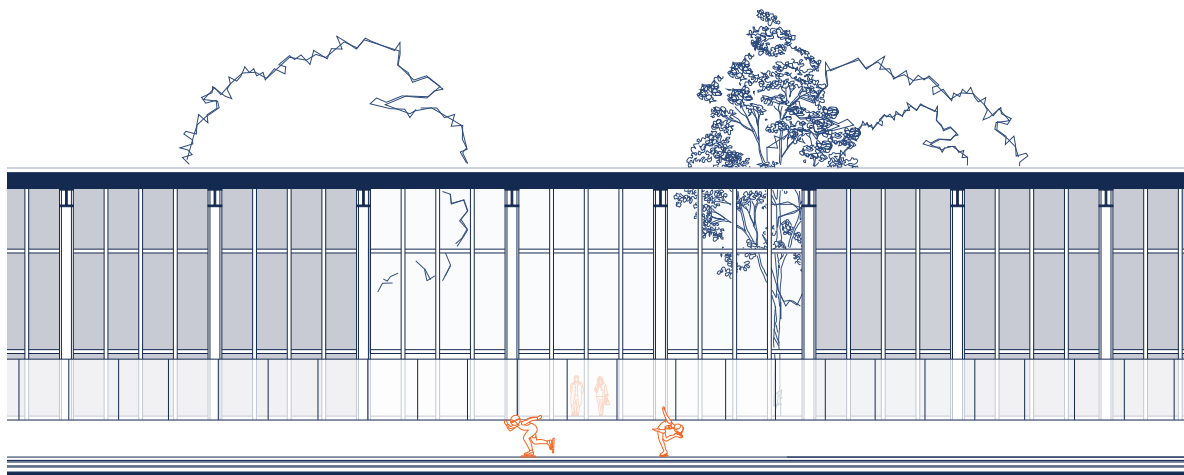




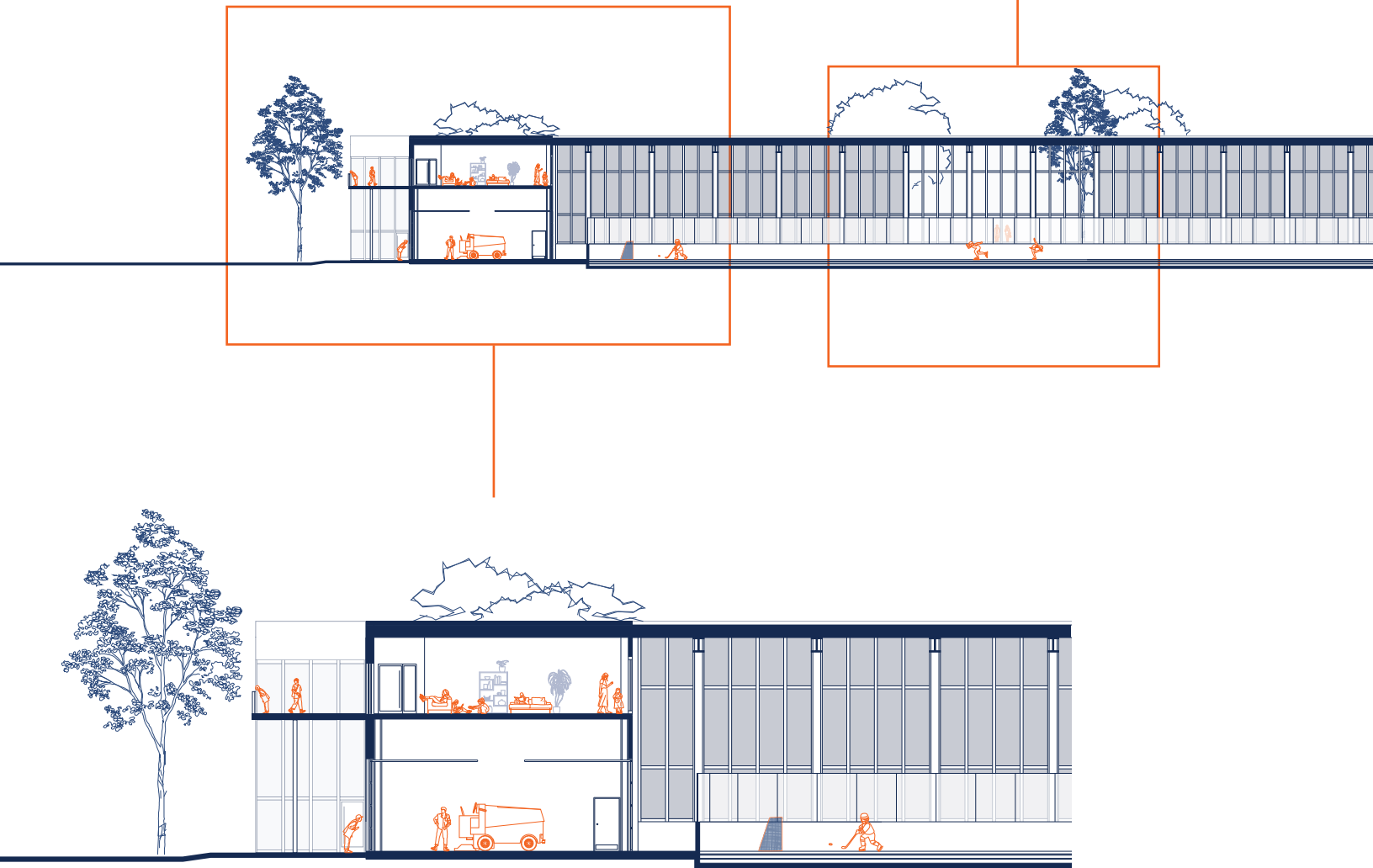
Fig. 103
Exterior perspective looking into the skating rink space.



Fig. 104
Interior perspective looking at skating rink space.



Fig. 105
Interior perspective looking from the student centre to the skating rink space.



In the centre of the ice is the reveal from the exterior pathways (see Figure 106). On the south end of the rink is an open space that can be used by sports teams to warm up and stretch. When there are seasonal markets, garage doors can open up to connect the rink space with the parking lot, creating an indoor/outdoor market hybrid. Outside of skating season, the rink can also open up for vendors to set up on the rink floor for fully indoor markets.

At the opposite end of the rink section is the back of house, and ice resurfacer room. Garage doors to the rink and the exterior allow the resurfacer easy maintenance, the garage doors and windows also showcase the resurfacer for the community to engage with and look at, outside of just on the ice. Above is the student centre where

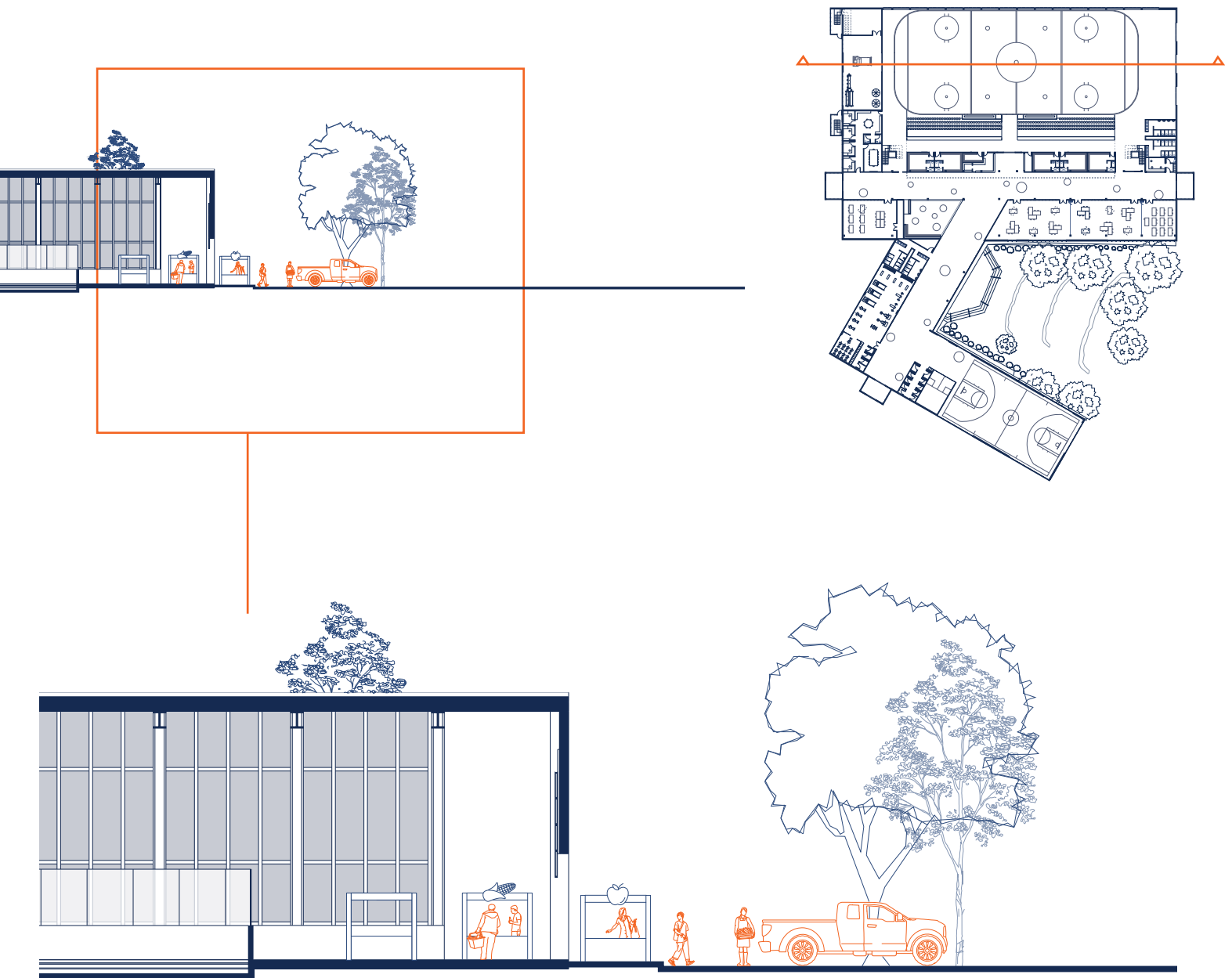
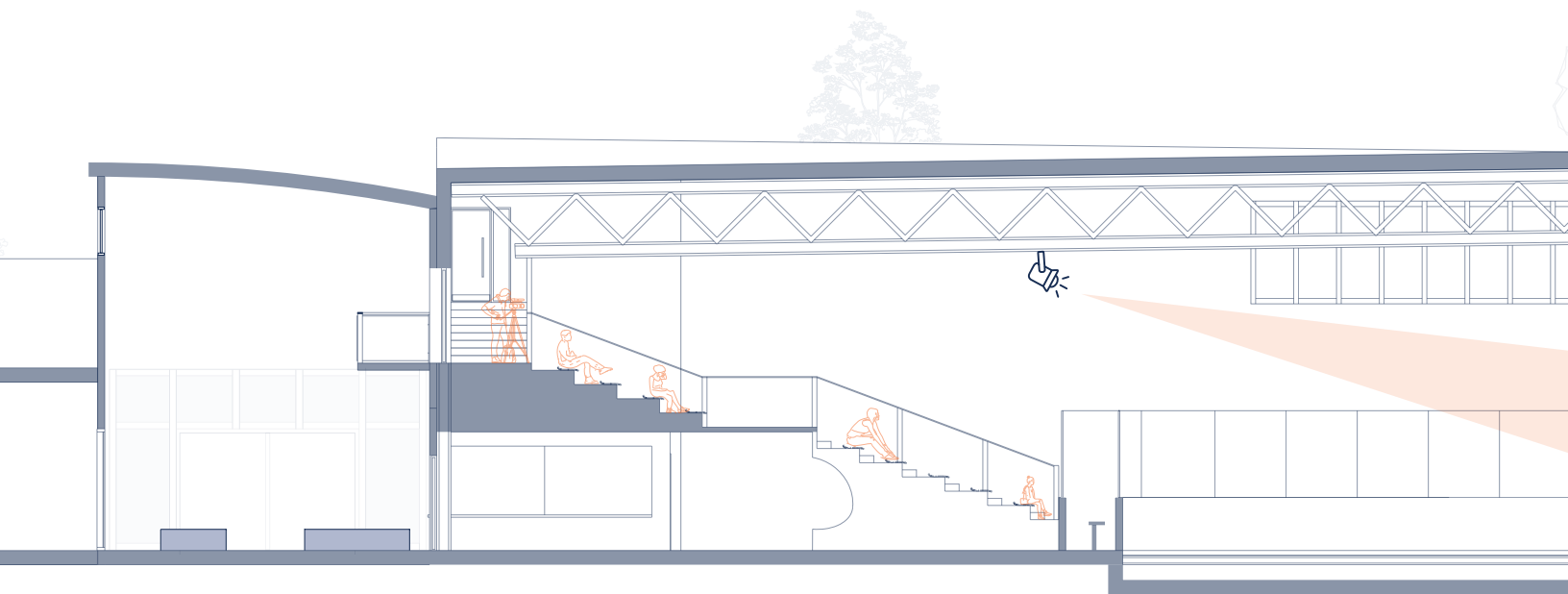


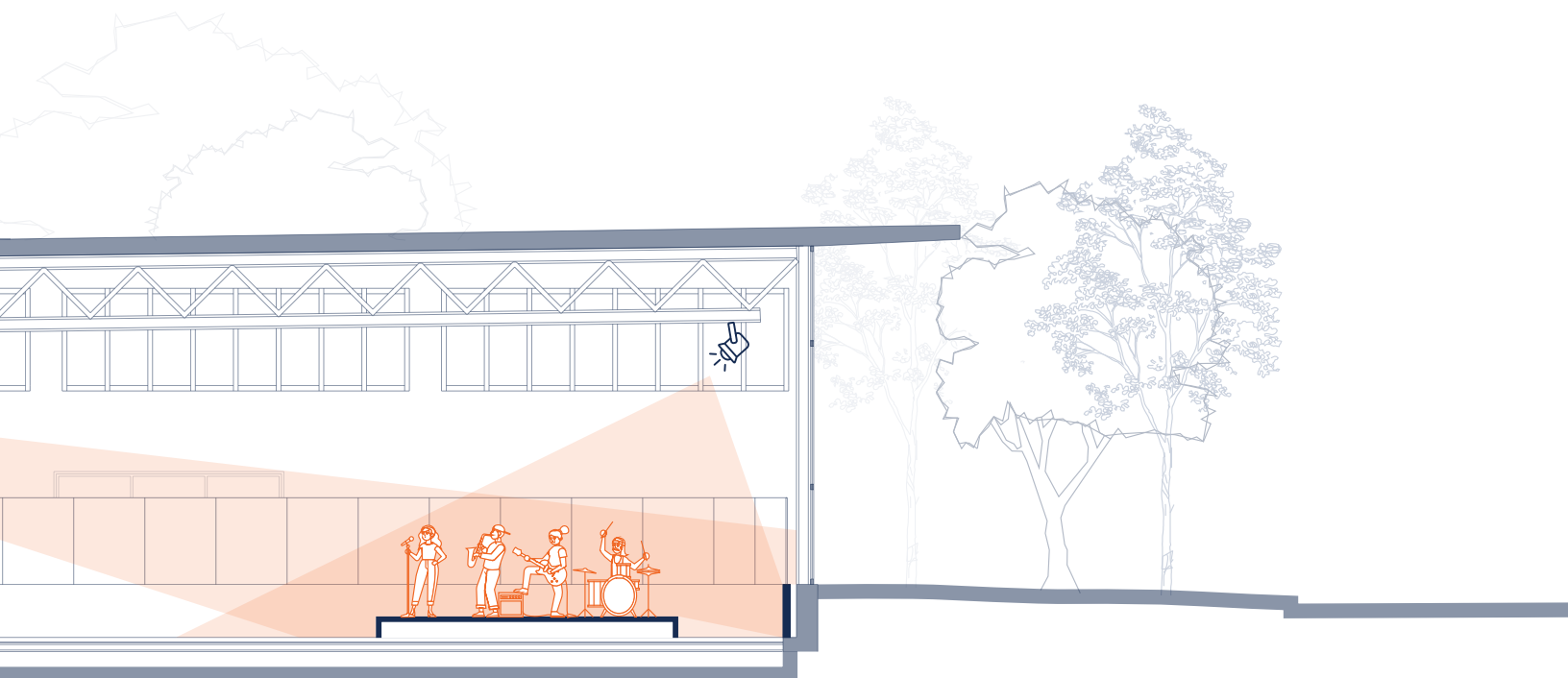
Fig. 106
Section through skating rink with
callouts of possible activities.

after school programs and educational camps can be held. There are windows along the interior facing wall so students can watch what's happening on the ice. There is also a balcony on the outside where more activities can happen, as well as opening up views to the surrounding community and connecting back to the outside surrounding green spaces.



To create a social place that takes advantage of the open space all year, there is an opportunity to host indoor concerts and events within the rink space. Seating around the lower rink surface can cater to public gathering, and larger events happening within the community, where a larger space can open up. Other potential events and activities for the rink space when skating season is over are farmers markets, summer sports, conventions, and celebrations. The long span of the rink opens up the space for an assortment of events throughout the warmer seasons.

Fig. 107
Section through rink with a band performing.



Part 5

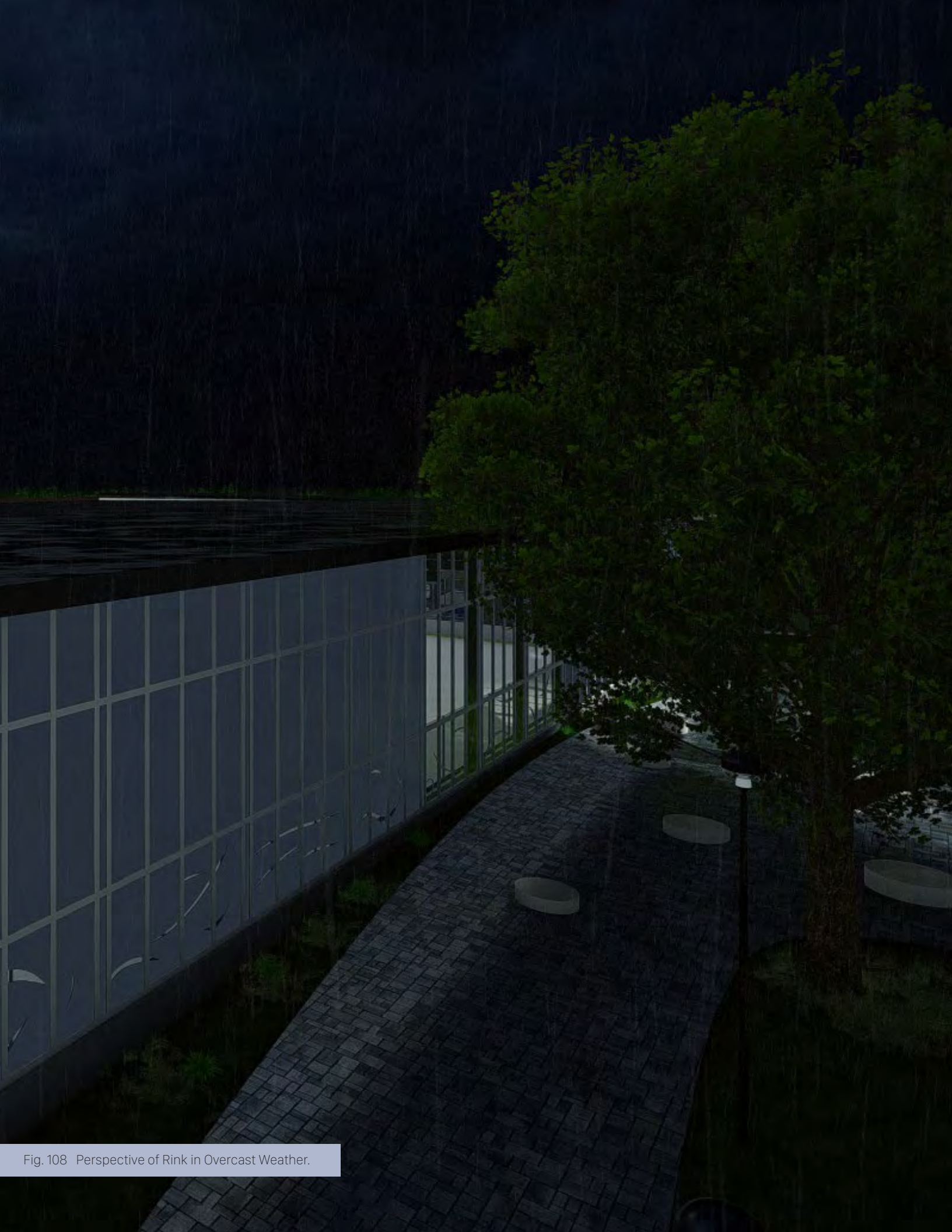


Fig. 108 Perspective of Rink in Overcast Weather.

Sustainability

Sustainable intervention within community buildings is not only important for reducing building impact on the environment, but it also brings a sense of pride within the community knowing a local building is built sustainably. Promoting sustainable design also allows community members to learn and endorse energy efficiency in architecture. A prime example of a sustainable building becoming a beacon for community pride is the Climate Pledge Arena in Seattle, USA. After a site visit and back of house tour, as well as engaging in the direct community and park, the number one comment that was said over and over was the fact that it's a clean energy building. Around the building, and around the site, are features to promote sustainability, even as far as exclusively working with companies that also share the same sustainable goals. This outreach for sustainable practice is how the community learns about sustainability, as well as promoting and adapting to strategies to reduce energy consumption.

Energy efficiency in rinks are critical for the sustainability of these building types, primarily why the community rink typology is slowly dying. The average energy use for a rink in Canada is 1,500,000 kWh/year, and can reach up to 2,400,000kWh/year.⁶⁰ In Ontario, arenas account for 39.6% of total energy consumption.⁶¹ This is due to the lack of passive design strategies, as well as the standard active systems that operate and refrigerate the building and ice pad. Another issue municipalities face in implementing these strategies is the expense that comes with it. To invest in an arena financially is difficult with the building primarily operating during the winter, and income from the building can not necessarily cover the cost of sustainable systems. For this reason, integrating old community rinks into new community centres with a place to skate can help offset costs to create a more universally sustainable building.

The primary areas of energy consumption in a rink are; heating, heat rejection, lighting, fans, DHW + surfacing, subfloor heat, and other miscellaneous usages. The heaviest energy usage categories are heating and refrigeration combining for roughly 65% of an arena's total energy consumption.⁶² Additional strategies to consider in this project include a green roof, solar fins with natural daylighting orientations, producing energy with photovoltaic glazing and exercise equipment, and finally, rainwater recycling.

Energy consumption, specifically in the rink space will be the most intensive within this proposed building. A typical community rink uses outdated, and frankly, inefficient systems and mechanical equipment that dramatically impact the net energy usage.

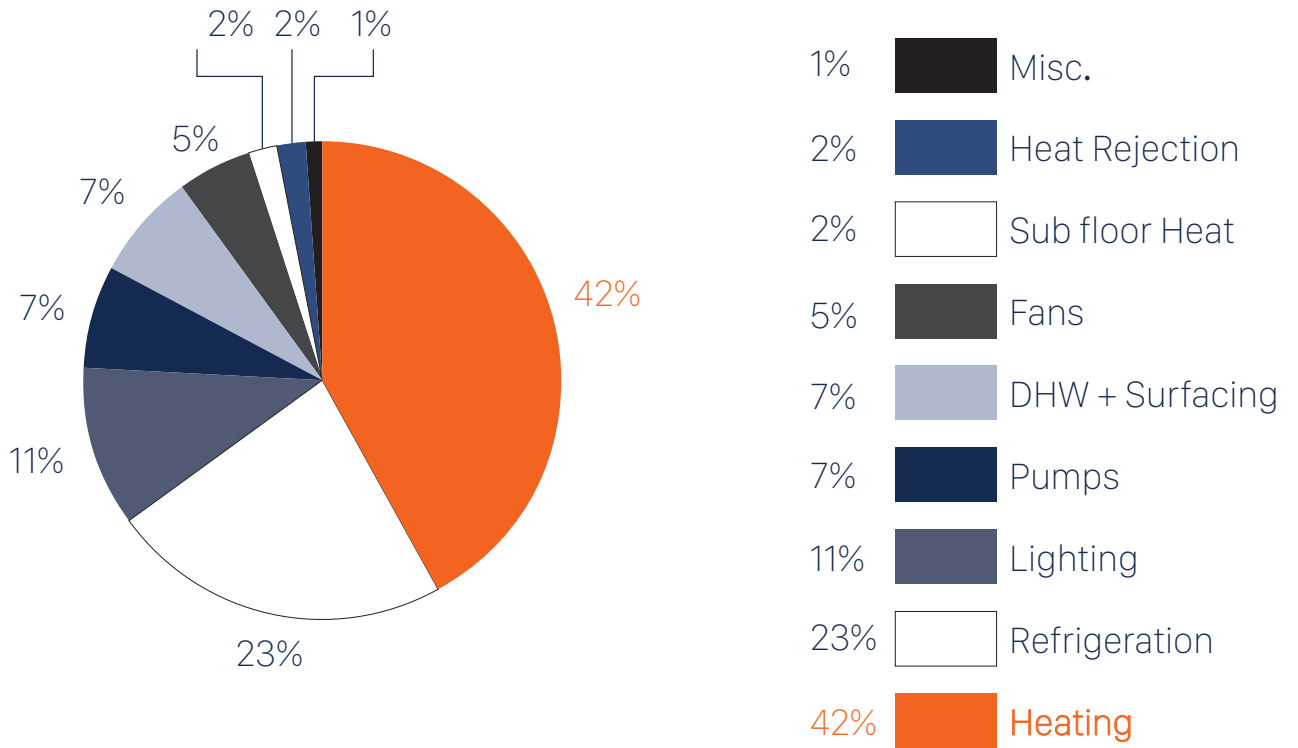


Fig. 109
Inefficient Arena (1,950,000 kWh).



Fig. 110
Image of Climate Pledge Arena in Seattle, USA.

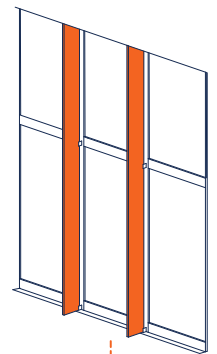
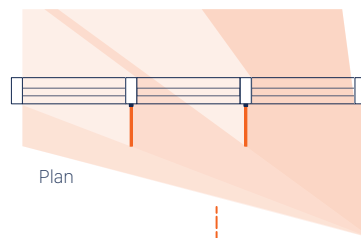
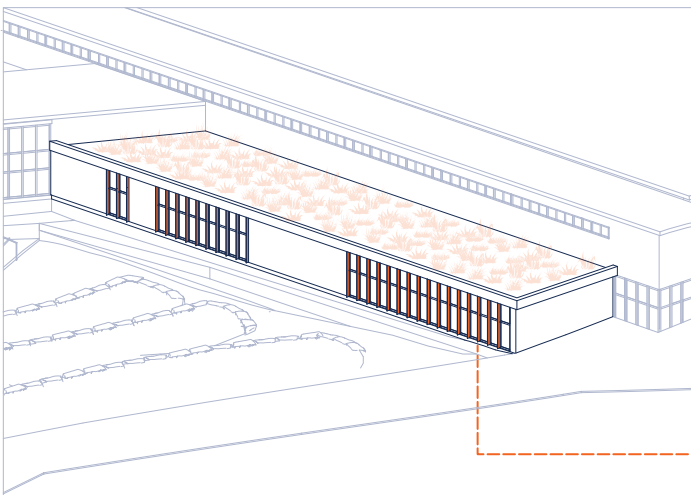
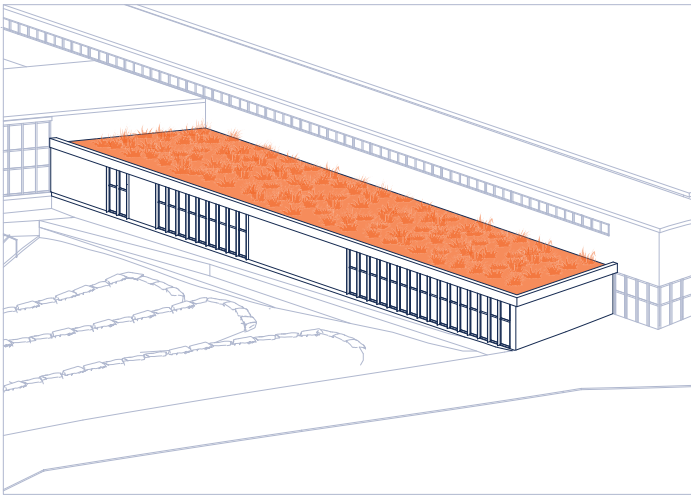
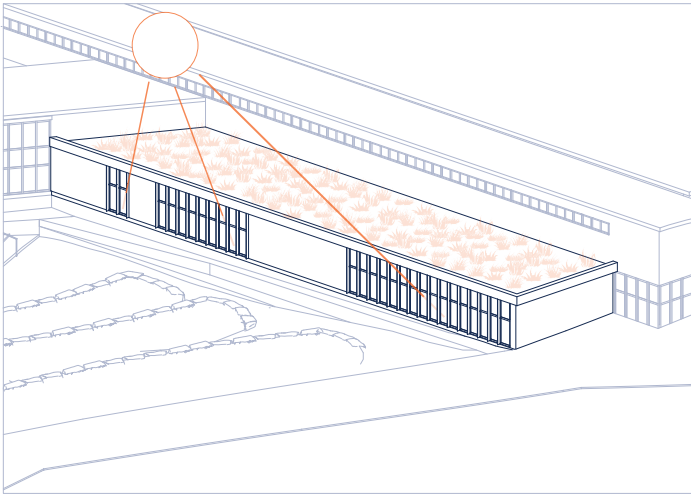
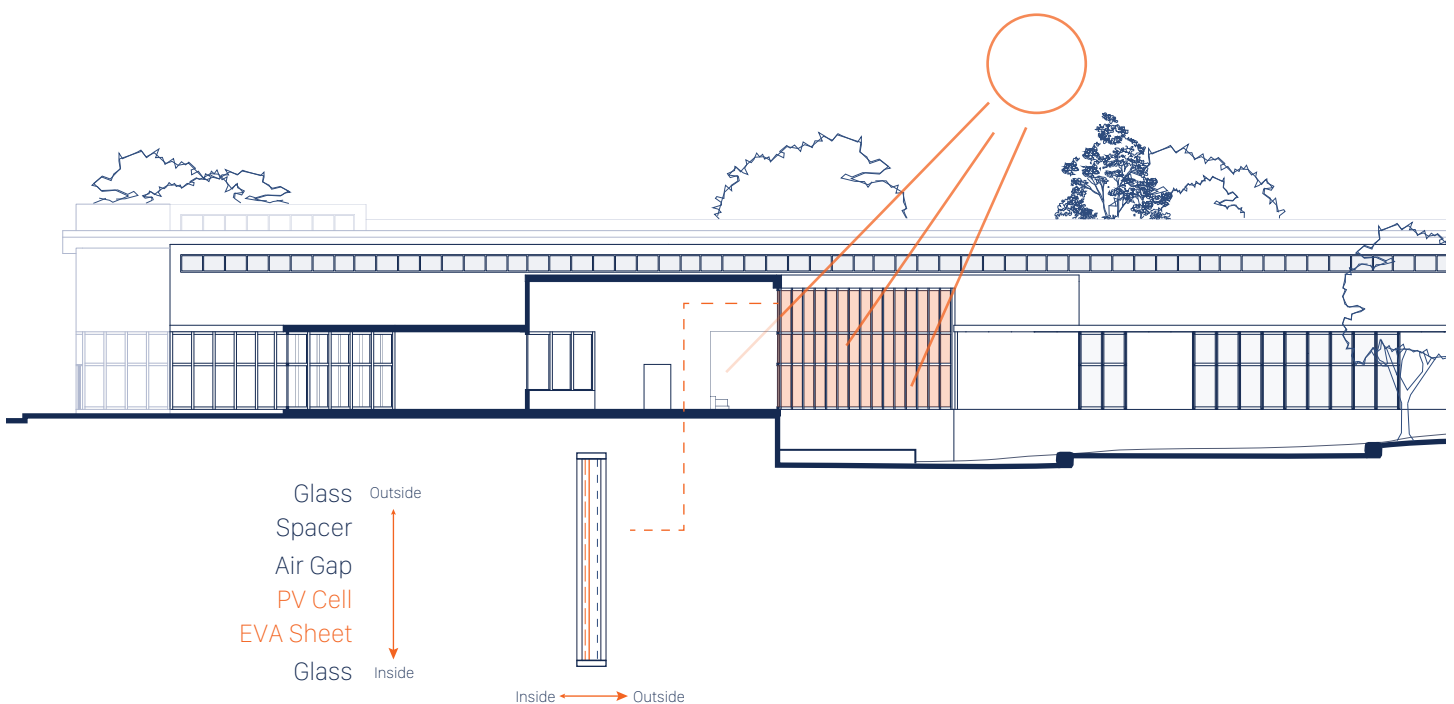


Fig. 111
Passive energy systems for the
community classroom space.

Above the community classrooms on a south facing facade, an accessible green roof was incorporated to add insulating layers into the roof. Apart from bringing the existing nature more into the building as a nod to the adaptive reuse, it also helps with storm water management on a building with a large footprint. It also acts as a thermal mass to insulate the roof and help reduce building heating energy usage.⁶³ In this same area embodying the community classrooms and workshops, translucent glass fins along the south facing facade allows diffuse indirect natural light into this space, as well as reduces internal glare for the users. They help the internal space receive less direct sunlight to create a more thermally comfortable environment, while maintaining visual connections between the building's interior and exterior social spaces.

Also on a south facing facade, the secondary social corridor features a large curtain wall that collects solar energy and the energy production for the building through photovoltaic glazing panels. This system allows light to still enter the building, while simultaneously converting solar UV rays into energy. On an exposed south facade, the glazing can collect and convert the sun's energy all year round to provide for the building, and help offset the annual energy usage. With the design featuring a lot of curtain walls and glazing, there is an opportunity to take advantage of the natural daylight to start producing energy for the building, and offsetting energy consumption through an internal system.

Fig. 112
Energy collection through
photovoltaic glazing panels.



An additional system that can be added, even after the final construction of the building, is energy producing exercise equipment. A lot of exercise equipment like treadmills, spin bikes, and elliptical machines consume energy, and add to the net energy consumption of the building. Investment in exercise equipment that produces energy can not only offset their own energy use, but possibly help with the net energy ingestion of the building entirely. "One of the essential rules you should adhere to when trying to elevate energy efficiency in your fitness center or sports venue is to always look for equipment and appliances with the highest energy saving potential."⁶⁴ Lucas Bergman writes about different ways to improve energy efficiency, and it simply comes down to using efficient equipment, or equipment that can be net positive in energy production for the building. Every little bit counts. The idea of using equipment that produces energy helps create a harmonious energy environment where different systems create for other systems utilizing electricity. With the size of the proposed exercise space in this community centre, being smaller than a typical gym, it is a realistic and attainable goal to incorporate these machines into the space. This goal can be achieved either immediately, or slowly replace existing equipment into more efficient machines upon funding.

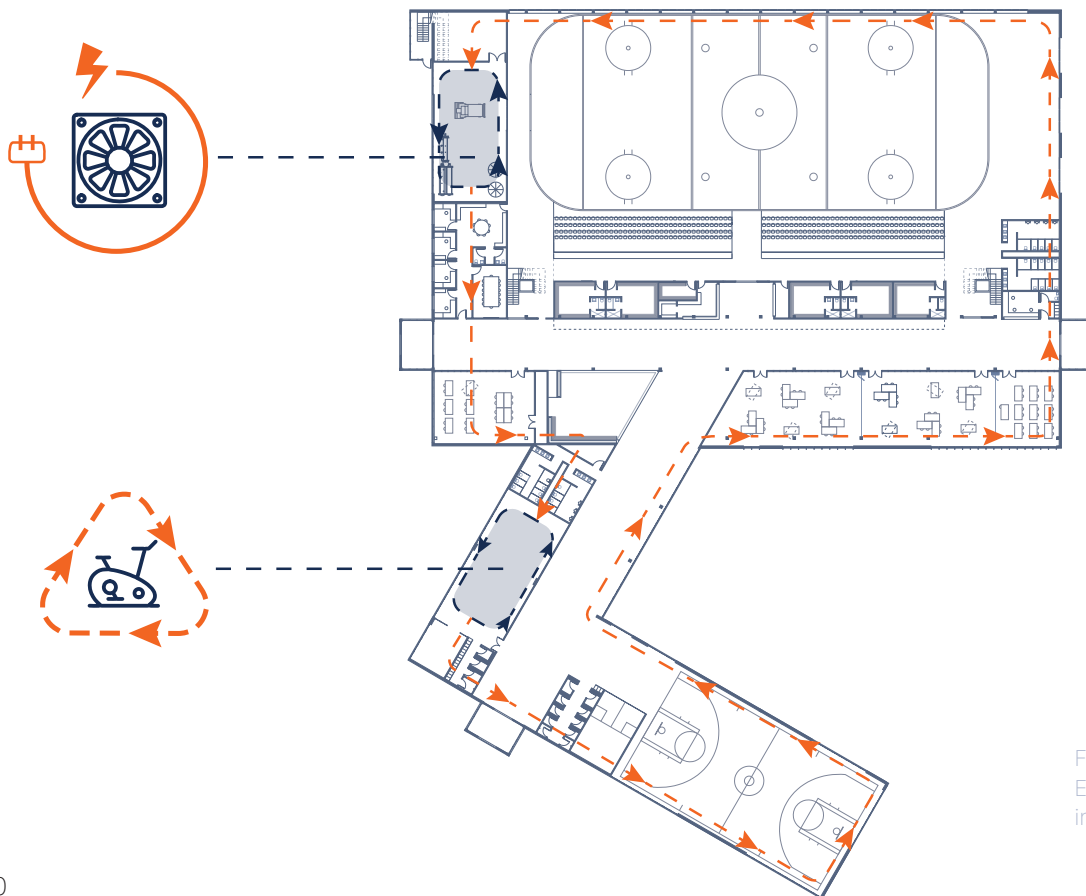


Fig. 113
Energy recycling and net zero internal energy systems.

Throughout the year, community centres with skating rinks use a substantial amount of water, a lot of which is for the ice resurfacer. On average, an ice resurfacer cleans the ice 10-12 times a day, while using between 200-275 gallons of water each run. The amount of water per run has to do with the ice's end quality goal, and type of resurfacer.⁶⁵ This means an ice resurfacer could use up to 3,300 gallons of water each day. Though each rink, arena, and community centre are different, there are roughly 250 working days where there will be ice on the rink. This works out that an ice resurfacer can use up to 825,000 gallons of water each year. To help mitigate the water consumption in this project, a rainwater collection system collects water from the roof of the rink to a cistern underground, where it can be used in the ice resurfacers. In Guelph, the annual precipitation amount is 37.7 in.⁶⁶ With a roof area of 40110 ft² (3726.341 m²), the potential rainfall collection comes to 942,000 gallons. Based on how many times an ice resurfacer runs each year, the system has potential, based on an average rainfall, to collect more water than required, offsetting the net water requirements for the resurfacer, and allowing the access water to go into other systems throughout the building.

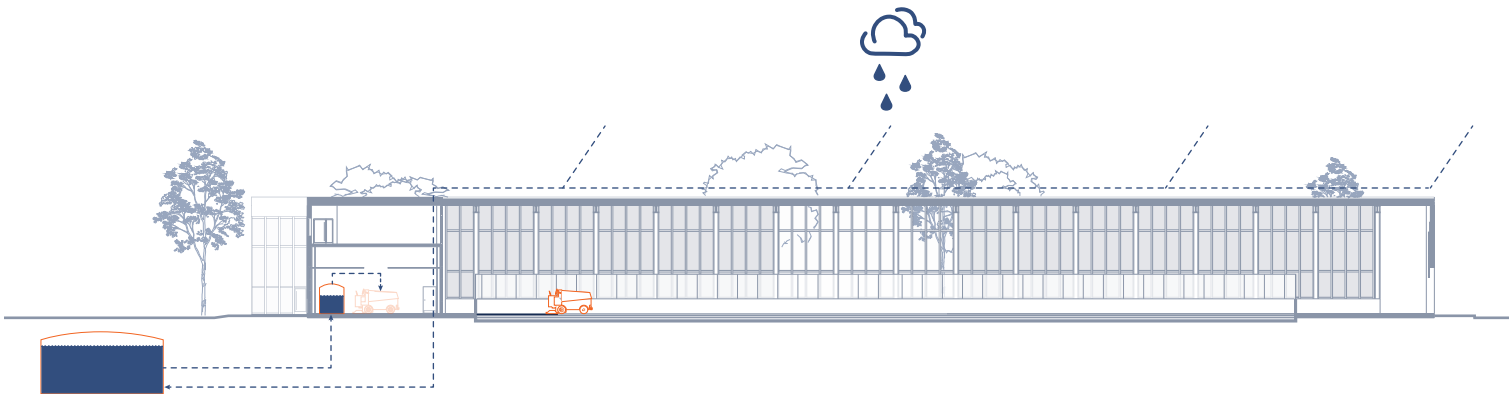


Fig. 14
Rainwater collection and recycling.

Roof Area (sf) x Annual Precipitation Amount (in) x 0.623 (Constant Conversion Factor) = Potential Rainfall Collection (Gallons)

Roof Area (ft) = 40110 sf

Annual Precipitation Amount (in) = 37.7 in

0.623 (Conversion Factor)

Roof Area (40110 st) x Annual Precipitation Amount (37.7 in) x 0.623 (Conversion Factor)

= Potential Rainfall Collection (942,000 Gallons)

Ice Resurfacers runs 10-12 times per day

Each run uses between 200-275 Gallons

12 x 275 = 3,300 Gallons Required per Day

Ice Resurfacers use as much as 3,300 Gallons/day

Rinks are open for about 250 days/year

250 x 3,300 = 825,000 Gallons

825,000 Gallons < 942,000 Gallons

The projected annual rainwater collection exceeds the projected ice resurfacer water usage based on external data.

There are also systems and strategies within the rink itself to help increase energy efficiency within the building. An example of this is the configuration of brine pumps, which circulates a liquid coolant beneath the ice, and the efficiency of this system. Forming the pumps along the ice as opposed to across the ice helps increase the energy efficiency of the system, as well as doubling the cooling pump pipes along this orientation to achieve a better distribution of cooling along the ice.

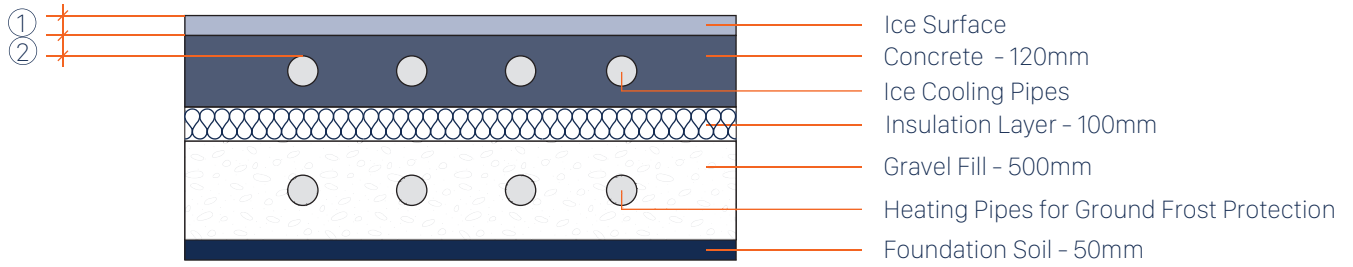


Fig. 115
Section of ice layers.

- ① Maximum ice surface layer should be 1 in.
- ② Maximum distance from Cooling pipes to ice surface should also be 1 in.

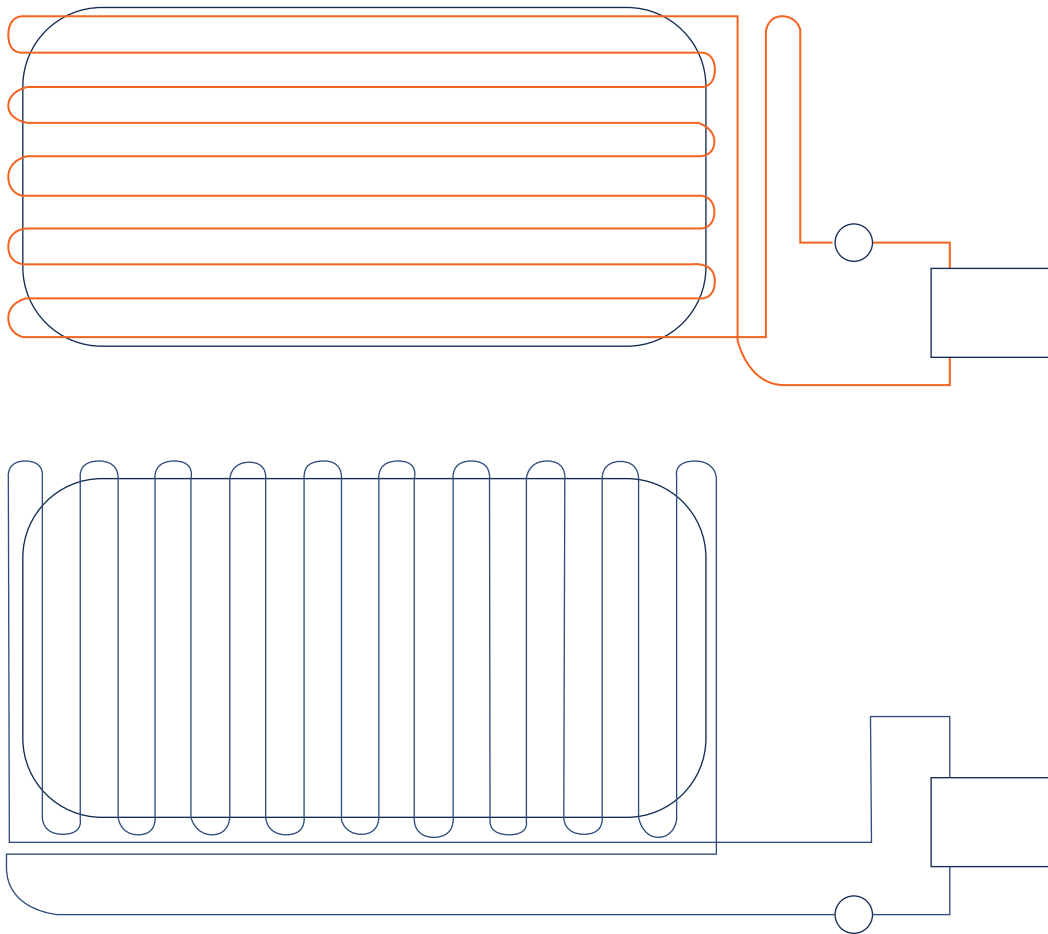


Fig. 116
Efficient brine pump configuration.

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Fig. 117 Winter Perspective of North Facade.

Conclusion

Exhibition Park is one of the most historic sites in Guelph. Throughout its history, it has grown into the heart of the Exhibition Park neighbourhood, and serves the community through its open fields, sporting fields, while also connecting to a pedestrian cycling and hiking trail that connects all of Guelph. Tucked away in the northern corner of the park, Exhibition Park Arena was built in the mid 1960's and has outdated sporting and community ideologies. It was built to promote Canadian heritage and celebrate skating, as a culturally significant activity. Currently, the rink does not fit into the neighbourhoods building fabric, it lacks community program and engagement which the locals need, and does not engage and interact with the rest of the park. There is a lot of potential for this rink to turn into a place that is more community driven, with public programs to allow a larger portion of the community to use it, that is engaging throughout the entire year. The goal of this

project is to transform this rink through adaptive reuse, into a community centre, which will hold a larger variety of events and programs, while integrating with the park itself, to create a more communally inclusive, socially equitable beacon for the community.

Analyzing different case studies including; Regent Street Aquatic Centre, York Recreation Centre, Evergreen Brickworks, and the Verdun auditorium, all projects in a similar climate and location within public park spaces similar to Exhibition Park Arena, helped build a system of transformation between the building perimeter, and the natural environment which surrounds the building. Analysis through a program matrix, describing the qualitative and quantitative parameters of events and activities held in the Exhibition Park neighbourhood, finding similarities in different programs, and configuring the matrix to achieve a final room list for the building, based on existing community activity, and room for potential future events.

So, how can social and communal collaboration be promoted from the adaptive re-use of an old community skating rink? It can be promoted through the integration of the site's history, from studying the relevant social activities, and how the community currently uses the park all in the design solutions throughout the community centre. Knowing the site's history allows the building to connect back to the community's fabric and identity through materiality or additional design elements that relate to historical accolades. In the proposed design, limestone was used throughout the building to reflect the historic neighbourhood and quarry industry building Guelph as a place. When the building's room program is either based, or directly corresponds to local events and activities, it allows the building's program to react and adapt to the direct needs and wants of the community itself. Through the use of the program matrix, seeing the existing events hosted in the park, allows the building to integrate into the park, and take part of the ongoing activities, similar to how the proposed building has open ended, multipurpose classrooms for users to share their

individual knowledge to the community. Finally, studying how the community uses the park before any building intervention allows the designer to add subtle details that amplifies community engagement in the building. The site plan and exterior design of the building is critical for its successful building integration. After looking at existing and anticipated pedestrian traffic on the site, exterior pathways which directly respond to how people will use the site, whether they come to the park and stay, or use it to walk through the neighbourhood.

Knowing how a site works and how people use it allows the design to speak to existing patterns which creates a stronger connection between the building, the park, and the people. Transforming the building from a rink which primarily hosts hockey and skating, catering to winter activities, to a community centre which hosts more seasonally friendly programs, that also has a place to skate, allows the community to come together and be social.

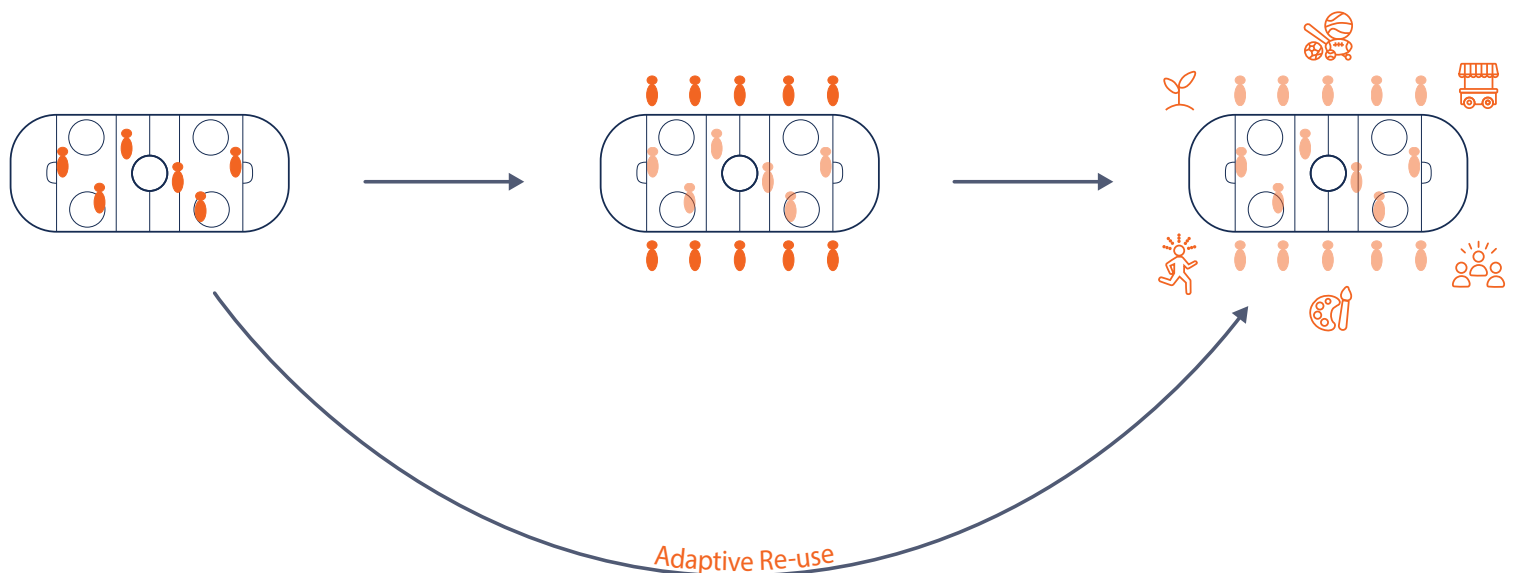


Fig. 118
Project summary diagram.



Guelph

EMERGENCY
EVACUATION
GATHERING
POINT

STOP

Fig. 119 Guelph Water Tower.

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